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# ELEMENTS
# OF THE
# SCIENCE OF LANGUAGE

BY

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with Affection to
my Pupils in
Benares, Calcutta and Bombay

# FOREWORD

वागर्थाविव संपृक्तौ वागर्थप्रतिपत्तये ।
जगतः पितरौ वन्दे पार्वतीपरमेश्वरौ ॥

It is well over a decade since I began to write this book and in fact the first three chapters have been in print quite a long while. For one reason or other the various chapters were written with long intervals in between. Hence the work might seem a bit patchy here and there and in places self-contradictory. My plan of the chapters has not varied much, but as I got more and more experience in teaching the subject I was obliged to vary the details considerably. A discerning reader will easily perceive the difference of treatment between the first four chapters and the succeeding ones. If I had been able to finish off the whole book within six months or a year after beginning it, I think it would have been much smaller and also more full of mistakes. I do not regret that it has taken so long in writing and finishing, for I have found more time for study and teaching and learning by experience.

I have intended this book primarily for Indian students. Comparative Philology is still a vague subject to most in this country and I have heard the wildest ideas about it even from otherwise learned and well-informed people. I will be perfectly satisfied if this book arouses the interest of our students in a subject universally regarded as "dry", and consequently extremely uninteresting. I well remember how I myself had to struggle through books dealing with the subject but containing illustrations

from modern and ancient languages of Europe—most of which were utterly beyond me at that time. I thought (and I think even now) that a great deal of the repulsion this subject evokes, is due to the fact that the examples do not come home to us Indians. This I have tried to remedy and this has been my main object in writing this book.

I have had the privilege to sit at the feet of many great teachers. I only hope I am not disgracing them in the following pages. And I have had the great joy of teaching hundreds of young men and women of my country in three great centres of learning—Benares, Calcutta and Bombay. I have had the rare good fortune of being rewarded by their genuine esteem and affection. Many of these have now achieved greatness on their own account. To both these—teachers as well as pupils of mine—I owe far more than I can ever hope to repay. And to both with deep reverence and affection I offer this slight tribute.

IRACH J. S. TARAPOREWALA

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Manoel da Assumpçam, a member of the Brotherhood of Saint Augustine in the congregation of Eastern India, was a Roman Cathotic Missionary from Portugal who ministered to the Bengali and other mixed Christian community in the district of Dacca early in the 18th century. He was the author of a Bengali Grammar in the Portuguese Language, which was supplemented by Bengali-Portuguese and Portuguese-Bengali vocabularies, and this work was published from Lisbon in Portugal in 1743. The Bengali words are given in the Roman character, following the Portuguese pronunciation of the letters. This is the oldest printed book dealing with the Bengali language. Padre Assumpçam was also the author of a Bengali translation of a Roman Catholic Catechism which seems to have been published in the same year. N.B. Halhed's Bengali Grammar published from Hughli in 1778 is the first book to employ Bengali types, and the present work is a quarter of a century older than Halhed's book.

* Text-Book.

Padre Assumpçam's Grammar is valuable from the philological point of view. It gives the Dacca dialect of about 200 years ago, and the system of Roman transcription of Bengali words is important from the point of view of Bengali Phonology. The work is rare, and the present edition has been made from the copy in the library of the British Museum. The text is a facsimile reprint of the original edition, page by page and line by line. A Bengali translation, the work of Mr. Sen, is given opposite, and there is an introduction in Bengali by Prof. S. K. Chatterji. A selection from the Padre's interesting and important vocabulary is also given.

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**Desinamamala,** edited with Introduction and Index, by Pandit Muralydhar Banerjee, M.A. Royal 8vo pp. 387. 1931. Rs. 6-0.

# CHAPTER I

## Introduction: The Psychology of Speech: Divisions of Philological Studies.

### § 1. *Philology is a subject of general interest.*

It has frequently been assumed that Philology is a subject of no interest whatever to the average student and that only a few specially gifted persons are capable of mastering or of even understanding the subject. There is somewhat of a truth in this assumption, but the fault lies with the books[1] that deal with the subject and not with the subject itself. If we open a book on Philology at random the chances are that we would be confronted with strange words in all sorts of languages, living, dead and hypothetical, and weird sounding technical words and wonderful seeming equations which purport to say that such and such a word in one language is the same as such and such a word in another language.[2] Of course in every science in modern days there are a lot of technical, and necessarily dry, details to be found, but that need not concern anybody except the expert. But the Science of Language should be of interest to every human being because it concerns the pre-eminently human faculty—the faculty of conveying ideas from one mind to another by means of articulate sound.

[1] Of course I must admit the glorious exceptions, such as, among English writers, Max Müller and Whitney among the older writers and several others among the more recent ones.

[2] E.g. चक्र = wheel = cycle; or गर्भ = calf; and many others.

§ 2. *Speech* (λόγος) *distinguishes man from animals.*

The Greeks had a very fine word to describe human speech. It was the word λόγος. The word also meant that other faculty which distinguishes man[1] from other animals, viz., the power of thought. The power of speech is impossible without the power of thought and hence the Greeks used the term, ἄλογα for animals—implying that they were without either kind of λόγος. Of course we know that animals can communicate to each other their various feelings like hunger, fear, sexual desire and so on, and this they do by means of the definite sounds they produce. But we cannot give the name *language* to these sounds, because of the one essential characteristic these lack; the power, that is, of thought, which lies at the back of human speech, however primitive it might be. It seems very likely that the human race, too, was in some long distant past speechless like the animals, but that must have been when the thought-centres were not developed enough in the physical brain.[2] We are not concerned with the details of the question here, suffice it to say that the human being in that stage of evolution was not able to express any but the most elementary feelings appertaining to his physical body.[3] With the gradual expansion of mental powers came the dawning of speech to the human race, and it seems probable that the sexual instinct had played a considerable part in bringing about this development.[4]

[1] The word *man* is from the √*man* (=मन्) to think.

[2] And probably this being was physically very different from the genus *homo sapiens*.

[3] Cf. आहारनिद्राभयमैथुनं च सामान्यमेतत्पशुभिर्नराणाम्। (हितोपदेश)

[4] It is fact that animals are most "vocal" during the breeding season. It is not for nothing that our Indian psychologists have called

### § 3. *Many forces combine to produce human speech.*

In whatever way human speech has developed our business is to investigate its varied richness and its history *subsequent* to its coming into being and establishing itself as the special distinctive mark of humanity. Philology now-a-days hardly troubles itself about the ultimate questions, for it is possible to advance many different theories as to these, each one of which may be supported by scores of examples. The probability is that each theory is only partially true and that many and various forces co-operated to give birth to human speech.

### § 4. *Thought and language, the two characteristics which differentiate man from the animal.*

But before we come to examine these in some detail, we should first try to understand wherein lies the special characteristic of the human race. The animal is not incapable of thought of a certain rudimentary type, and some individuals among the animals are capable of fairly complex trains of thought.[1] But taken as a whole we are justified in maintaining that beyond the most elementary processes animals are incapable of thinking. Animals, for example, can express the feelings of hunger, of pain, of anger, sexual desire and such other elementary needs of their lives, but not a connected chain of

this sexual instinct the **प्रादिरस** (the first instinct). See an essay on the *Origin of Language* by Mr. Sasadhar Ray, M.A., B.L., in Sir Asutosh Mookerjee Silver Jubilee Volumes (Vol. I, pp. 77 ff.).

[1] Like the horses at Elberfeld who could work sums in arithmetic or the educated dog of Mannheim (See *Revue Psiche*, Sep. and Dec., 1913). Monkeys, like the famous Consul, are also examples.

ideas.[1] And most primitive ancestor of the human being was not very much different.[2] But we may be safe in asserting that ever since *homo sapiens* has developed on earth, language has formed a very essential part of his equipment, and that it is the high mental development implied by language that has placed him at the head of all evolution.

### § 5. *Thought and language must go together.*

By "language" in this connection we imply any means, whether vocal or otherwise, by which one human being may communicate his ideas to another. This is a swift and powerful means of progress, for by it many minds can co-operate as if they formed a single one.[3] A human being thinks and, as a necessary corollary of his thinking, he wishes to communicate his ideas. In the beginning he may have done so by movements of his limbs, but articulate speech must have followed almost immediately. "Man's prerogative is to dominate his world by the aid of intelligence of a high order. When he defied the ice-age by the use of fire, when he out-faced and outlived the mammoth and the cave-bear, he was already

[1] It has been found that when an animal has learnt a complicated trick, it does so not by a process of reasoning (i.e. of connecting cause and effect) but merely of a mechanical repetition of certain movements in a certain order.

[2] No such race of man has been known as existing in the world at present. This race of primitive humanity has long since vanished. Our conclusions regarding their linguistic capacity are solely derived from the shape and size of the most ancient skulls which bear affinity to human skulls.

[3] Animals also can act "as one", especially those of the gregarious type but they do so by instinct; and it takes long generations and a fierce struggle for existence before a particular instinct can be established as a part of the equipment of a special type.

the rational animal, *homo sapiens*. In his way he thought even in those far-off days. And therefore we may assume, until direct evidence is forthcoming to the contrary that he likewise had language of an articulate kind. He tried to make a speech, we may almost say, as soon as he had learned to stand up on his hind legs ".[1] As soon as, therefore, man begins to think, i.e., to have concepts, he must have language. The question of the close relation of thought and language need not detain us here : suffice it to say that except in the most rudimentary forms (and perhaps also in the highest regions of transcendental metaphysics) thought and language are practically two aspects of the same fundamental principle. "If language is ultimately a creation of the intellect, yet hardly less fundamentally is the intellect a creation of language ".[2]

### § 6. *The three stages of "language" : 1. gesture, 2. articulate speech, 3. written speech.*

The human being cannot live by himself. He must form social groups. In doing so he must needs contrive to make his wants understood by his fellowmen. This he can do in three distinct ways : 1. when at a distance he may make use of gesture ; 2. when in closer proximity he may use articulate speech in addition to, or entirely supplanting, the gestures ; and 3. he may inscribe certain signs on suitable material or otherwise embody his idea in some other conventional material form.[3] The last method implies a higher development than the former two, for by its means the human being is enabled to overcome

[1] J. R. Marett, *Anthropology*, pp. 131 f.

[2] Ibid, p. 130.

[3] Such as by the use of knotted strings, notched sticks or by other methods.

both time and space. Philology, in the sense in which it is understood generally, concerns itself mainly with the second stage, viz., spoken language.

§ 7. *Percepts and concepts: speech begins with concepts.*

Man is continually receiving impressions through his five senses from his environment and his mind proceeds to analyse these separate impressions or *percepts* and tries to find out common factors from among a multiplicity of impressions. For this purpose he proceeds to arrange these impressions in "bundles" as it were, and proceeds to label the common factor in each "bundle" for future use. This common factor thus arrived at for each "bundle" is called a *concept*.[1] Now unless these are properly named and thus differentiated from each other, they could be of no use whatsoever. Here it is that language or "the power of naming" must come in. Let us take a concrete instance and see how an infant learns to speak. Among the earliest concepts of the infant is the one which he draws from among his pleasantest sense-impressions. He is fondled, nursed, cleansed, kissed, petted and, in general, has every bodily comfort seen to by those around him. Each such act done to him creates a separate impression; but very early the infant sees one person predominantly connected with these, especially with the most pressing need of his little body,—food. This is the first concept he has formed. He expresses it at first by gestures of delight or by inarticulate sounds of joy, but as soon as he can articulate he discovers that those around him attach the "label" *mā* to that concept. The same process is repeated incessantly throughout our life and we gather up new

[1] Cf. Locke, *Essay on Human Understanding*, III. 3. 20.

impressions and make fresh "bundles"[1] or rearrange our old "bundles" and label the new arrangements thus made with fresh labels, ringing endless changes upon the store of sense impressions we possess. This faculty of analysing the infinite number of perceptions and arranging them variously into separate "bundles" is beyond the power of any animal whatever.[2] It is only the Divine Spark of the mind that enables man to think and to make this analysis. It is because of this faculty that he is the MAN (the Thinker).

### § 8. *Concepts must be put together.*

The re-arrangement of percepts into bundles, or concepts, gives rise to distinguishing labels, i.e., mere names, which by themselves are not enough. Merely uttering the name of a concept by itself conveys no idea to the hearer, unless and until it is joined on to some other concept which has been similarly derived. That is to say, after the analysis which gives us our concepts we must have a synthesis (i.e., a putting together of several concepts) in order to be able to convey our ideas to another. The other concept need not necessarily be expressed in words, it may be merely implied by the "context of circumstances".[3] Thus if we say "X is reading", we have this

[1] Exactly the same fact is enunciated by Śankara in his *Vedānta-sūtra-bhāṣya* (I. 3. 28) where he says, आकृतिभिश्च शब्दानां संबंधो न व्यक्तिभिः। व्यक्तीनामानन्त्यात्तद्ग्रहणानुपपत्तेः। "The relation of a word is with genera (i.e., concepts) not with individuals (i.e., percepts); for as individuals are endless it would be impossible to lay hold of the relations."

[2] Unless, of course, we believe in human souls (and hence, necessarily, human minds) occupying animal bodies.

[3] E.g., when I look at my servant and say, "Chair", he would bring me one.

double process of analysis and synthesis. We have first of all arrived at the concept " X " : we perceive a particular person in various states—eating, running, sleeping, talking, etc., and we label the common factor of all those " X ". We, in the second place, draw another concept by seeing A, B, C, D and many others doing the same action and we label that " reading ". And only by combining these two concepts together, we can convey our ideas to another mind.

### § 9. *The sentence is the unit of language.*

Such, in essence, is the nature of language. The use of language, therefore, implies this double process of analysis and synthesis. Mere analysis is not enough. And this brings us directly to the fundamental principle in dealing with languages, that *the sentence is the unit of language.* For it is obvious that mere sounds are no language, nor, as we have just seen, are merely the "names" by themselves, unless they are put in connection (express or implied) with other " names ". Hence it follows that in dealing with the various types of languages and with their mutual relations the main point to consider is, how different communities and races manipulate this art of synthesis.[1] Of course the power of analysis and the subtlety of the resulting re-arrangements of the " bundles " marks the growth from savage to civilised idiom, and the synthesis is more or less in direct proportion to the power of analysis. The question of the interrelation of languages if treated from this point of view would become one of the utmost human interest. Unfortunately few books of

[1] See below Chapter III, where the point is touched upon to some extent, and Chapter VII, where an attempt has been made to go into some details.

philology deal with this subject, hence the subject has got the reputation of consisting merely of "dry bones" and being "very dull".

## § 10. *The theory of roots.*

The next question we have to consider is, why have the concepts been named by the various races in such and such particular way, whether there lies any rule or set of rules, at the back of these "names". This investigation has brought out a very interesting conclusion. We have said before that the various "bundles" are re-arranged in different ways, and so it naturally follows that many of these "bundles" are discovered to be closely related. Besides, in most languages the words used in a sentence are not in their crude forms but variously modified. Proceeding in this way Pāṇini discovered in India more than 2000 years ago that language is ultimately made up of what he called धातु or *roots*.[1] These roots are the ultimate foundation upon which the whole superstructure of a language is erected. Perhaps it were truer to vary the metaphor and to say that the roots are the atoms of which language is composed; for, just as it is not possible that matter could exist upon earth purely in the atomic state, so also it is not possible that a language (especially an inflected one like Sanskrit) could exist in the state of roots merely.[2] The same is found to be the case with a language like English. We know, for instance, that there are about 250,000 words in English, which may

[1] धातोः। Pān., III. 1, 91.

[2] We must be always very careful not to carry our comparisons too far.

all be traced to a few roots.[1] One root therefore would give rise to a very large number of words. Take for instance the I. E. √*bher.[2] In the Germanic it takes the form *beran* and through this we get the English words, to bear, burden, bier, barrow, barley (bœr-lic), beer, barn, bairn, birth and others. In Latin the same root assumes the form *fero*, and through this we get another series of English words, far (=barley), farina (=barley flour), fertile, reference, deference, conference, difference, inference and a host of others. In fact these ultimate roots are at the basis of most languages. They have three principal characteristics, as noted by Max Müller:[3] 1. they contain certain definite sounds which may be modified in accordance with fixed rules for each language; 2. they nearly all express definite *acts* which human beings can perform; and 3. they all express *concepts*, never percepts.

## § 11. *Various theories about the origin of language*:

### (*a*) *Languages are created ready-made by God.*

In the early days of Philology the minds of scholars were much exercised about the origin of human speech. Various are the theories advanced to explain the reason why a particular sound was chosen to express a particular concept.[4] The ancient peoples all ascribed their speech to the Gods. We call Sanskrit the देवभाषा, and in Europe too the legend of the Tower of Babel ascribed the origin and

[1] Pāṇini formulated about 800 roots for Sanskrit. English has about 460 "Aryan roots".

[2] Skt. भृ (भर्), to bear, to carry.

[3] *Three Lectures on the Science of Language*, p. 28.

[4] This must be qualified to apply mainly to the Indo-European Family.

diversity of all languages to the direct interference of God. In one sense this is a correct view to hold, for language is the direct result of the God-granted gift to mankind—the mind.

### (*b*) *Language as the result of evolution.*

But this view does not clearly answer our original question as to why one particular combination of sounds came to represent one particular concept. Modern philologists, quite rightly, refuse to believe that God poured down ready-made languages into the brains of human beings. Like everything else in the universe, languages are also the product of a fairly complex, though perfectly ordered, evolution. From simple types they have become more and more complex in exact proportion as the race evolved from its primitive simplicity into the complexity of civilised life. And the origin of language (i.e., of articulate speech) has now been accepted as due to psychological processes going on within the human brain.

## § 12. *The origin of language is in the revival of the motor element accompanying a perception.*

Perceptions are generally accompanied by physical movements.[1] There are desires and other emotions excited in the human being as a result of every perception and in order to satisfy these there are movements of the body. For example, a man sees a tiger and his first impulse is to run away and he generally does so. Or a man sees a stream of water and he walks up to it to quench his thirst. Moreover, besides these movements which follow upon the act of perception, there are various little (often imperceptable) movements which *accompany* the very act of perception; such, e.g., the act of touching or smelling an object,

[1] Stout, *Manual of Psychology*, Book IV, Chap. 5.

or straining the ear to listen to a sound. Thus every act of perception has a *motor element* accompanying and when that perception is recollected, this motor element in it is also revived. For example, in recalling a piece of music, we tend to repeat the attitude of listening. In the case of sound, if we could articulate it, we make use of our vocal organs mentally. We can as perfectly control this revived motor element, especially if it is concerned with the vocal organs, as we do while actually speaking. So we can also control more or less perfectly the recollection of any other kind of motor element (e.g., a gesture) which accompanied the original perception. And the psychological origin of language lies in this revival of the motor element which accompanied the original perception. Because language is the only way in which concepts (or ideally represented objects) can be fixed and since the motor constituents of mental images have the means of controlling this ideal representation, language must have its source in these motor elements. And the first sign of language is when the motor aspect tends to issue forth as actual movement of the vocal organs. Dr. Bain says[1] : "if there be much excitement attending the recollection, we can with great difficulty prevent ourselves from getting up to repeat them (the movements)....A child cannot describe anything that it was engaged in without acting it out to the full length[2]...When we recall the impression of a word or a sentence, if we do not speak it out, we feel the twitter of the organs just about to come to that point". In short as he says further on, " thinking is restrained speaking or acting ".[3] In some cases the excitation of the motor centres accompanying the recollection is so great that it

[1] *The Senses and Intellect*, p. 357.

[2] So also very emotional people.

[3] Op. cit., p. 358.

bursts out in involuntary movement. Among children, among excitable people and among certain classes of primitive peoples the bodily movements make up a considerable proportion of "speech". The gesture language of North America is a highly developed institution and has been fairly extensively used for intercourse between tribes who do not understand each other's language. These gestures are mostly natural but sometimes they are conventionalised and even abbreviated.[1]

§ *13. Theories explaining the connection of sound and sense.*

The gesture language[2] is very soon replaced by spoken language and attempts have been made to connect the sound and the concept in some manner. Various theories have been advanced to explain this connection, Max Müller has described in his picturesque style four of these theories. He calls them the *Bow-wow* theory, the *Pooh-pooh* theory, the *Ding-dong* theory and the *Yo-he-ho* theory.

(*a*) *The Bow-wow theory.*

The *Bow-wow* theory (or, to use the learned name, the *onomatopœtic* theory) supposes that objects are named after the sounds they produce. Thus *cuckoo* in English, or *miaou* in Chinese, are clearly the sounds produced by the animals.

[1] For instance an American Indian in order to express "an old man" bent his right arm at the elbow, fist clenched with the fingers and thumb sidewise. That is the position of the arm of an old man holding a stick. When not understood, the "speaker" bent his back and tottered a few steps, thus completing the full gesture. (*Annual Report of the Bureau of Ethnology of the Smithsonian Institute*, Vol. I, p. 276, quoted by Stout, loc. cit.)

[2] When the distance is too great for the human voice to reach, other devices are used; for instance flashes of light (as in our heliograph), or flags, or the famous *drum-language* (a very complex affair) used by certain African tribes.

We know children always name animals by the noise they make.[1] But this can explain only a small portion of the vocabulary of a language. This theory, says Max Müller, "goes very smoothly so long as it deals with cackling hens and quacking ducks, but round that poultry yard there is a dead wall and we soon find that it is behind that wall that language really begins".

*(b) The Pooh-pooh theory.*

Next we get the *Pooh-pooh* (or *Interjectional*) theory[2] which takes its stand on the psychological fact that different perceptions excite different feelings and emotions in the human being, and there is an appropriate sound to express each human feeling. Thus the words *fie*, and probably *fiend* (according to some) are expressive of horror. But this explains even fewer words than the first named theory and we are here on very slippery ground. For one thing, the sounds accompanying different emotions are not the same for all nations. Thus, when the Englishman, being used to repressing his emotions, has a very limited set of interjections to rely upon, other nations seems to have an excess of them. And in the second place it is always possible to let the imagination run riot in the search of ultimate solutions.[3] The theory sounds, however, very likely and has doubtless some truth in it.

[1] I knew a Bengali boy who used to call an old friend of his father আপনি, because the old gentleman always greeted the little chap with the words "আপনি ভাল ?"

[2] Also called the *Tut-tut* theory.

[3] Thus in a recent book, *The Philosophy of Speech* (by George Willis) attempts are made to connect *God* and *good* with the sound *goo-goo* which a cheerful and healthy infant utters, and to show that the *m*-sound in *mute* and *mystery* and *myopia* indicates silence! People have also tried to explain the *pr*-combination in Skt. प्रिय, and the connected *fr* in *friend*, by the primitive man's *purr* of delight when his beloved was beside him!

### (c) *The Ding-dong theory.*

The next one is the *Pathogenic* or *Ding-dong* theory. It also gives satisfactory explanation of a certain number of words. According to this theory "specific kinds of objects so affected the primitive man as to elicit from him, or to make use of Max Müller's metaphor, to *ring out* of him, correspondingly specific utterances".[1] The word *zig-zag* in English, also the modern *jazz*, the word *dazzle* (probably) and such others may be cited as examples. The Hindi word झगमग and a large number of the Bengali ध्वन्यात्मक words may come under this head.[2] Reduplications for the sake of emphasis, as in "a big big man", come under this head.[3]

### (d) *The Yo-he-ho theory.*

It has been observed that roots express acts which can be performed by human beings. We find that it is the habit with labourers, while doing a heavy bit of work, to utter loud sounds in unison. This undoubtedly lightens the mental fatigue accompanying bodily labour. The sailors, for example, when hauling in the anchor shout together "yo-he-ho", and this has been cited to explain the first syllable in *heave*. This is the *Yo-he-ho* theory which says that the action itself is indicated by the sounds that accompany the action.

It will be seen that no single one of these theories would explain all the facts of language. Perhaps not all of them put together would explain clearly the whole of the roots

[1] Stout, loc. cit.

[2] See Tagore's শব্দতত্ত্ব and Ramendrasundara Trivedi's শব্দকথা.

[3] So also in our Indian dialects গানতান, কাপডটোপড, etc. Among the Brazilian Botocudos *ouatou* is "a stream", but *ouatou-ou-ou-ou* is "the sea" (Stout, loc. cit.).

of any language. Surely there should be as many different kinds of explanation as there are mental processes which accompany articulate speech.

### § 14. *Comparative and historical methods.*

With all these theories regarding the origin of words or roots we do not concern oursélves much in modern days. These questions are largely speculative and there are not facts enough discovered yet to warrant the formulation of any definite theory. Modern Philology concerns itself more or less with existing languages and the present tendency is mainly the collecting of a large number of facts with regard to each language. These philological treatises fall into two chief types—*comparative* and *historical*. The former type deals with kindred groups of languages (all of them being nearly at the same stage of growth and development) with a view to finding out similarities in sentence structure, in word-building, in sounds and so forth. The latter, or the Historical method, traces out the growth and development of a single language through all its stages from the time of its earliest records. A certain amount of hypothetical work has to be introduced into these studies (e.g., forms of the original I. E. words), but every step is now guided by accurately defined laws based on precise observation. So there is no truth now in the old gibe levelled at philologists in the early days that with them "consonants were of little worth and vowels of no value at all".

### § 15. *Special branches of philology.*

These are the days of specialisation, and hence there are special branches of philology, which though closely interrelated are yet sufficiently clearly marked out from one another.

### (*a*) *Syntax.*

In the first place there is the branch dealing with *Syntax*. As mentioned above the sentence is the unit of language: sentence construction is, in fact, the most essential factor of a language, and hence it should naturally be the most important branch of our study. But it is a psychological fact that very rarely indeed can a man master more languages than one equally well. Comparative Syntax, by its very name, presupposes a thorough knowledge of at least *two* languages. Hence it is not at all surprising to find that this branch of philology is yet only in its infancy. Even Historical Syntax presents a great deal of difficulty unless one thoroughly understands the psychology of the old races who used the language in the past.

### (*b*) *Morphology.*

The second important branch is that which treats of word-building or *Morphology*. This is closely connected with Syntax at many points. But it is on the whole easier to study and has been fairly thoroughly investigated.

### (*c*) *Phonology.*

The third branch is *Phonology*, which deals with sounds and their changes either from dialect to dialect or from one period of a language to another. In connection with this we have also to study *phonetics*, which deals with the structure of the vocal organs and the whole science of sound-production and the rules of sound change. One very important item in this branch is the discussion of the accent and its effect upon sound changes.

*(d) Semantics and (e) Urgeschichte or Linguistic Palæontology.*

These three, mentioned above, are the "formal" branches of philology. And we have two more branches if possible more interesting, because they touch more the *human* aspect of the subject. These are *Semantics* and *Urgeschichte*. The former is the science of meaning. This is in its infancy, for here too, a deep knowledge of the language is needed. It is in some respects the most fascinating of the branches of philology. Urgeschichte[1] deals with the light which language throws upon the past history of the people, especially upon the prehistoric antiquities of a race. This is also a very fascinating study and here philology comes into intimate touch with other sciences, notably with anthropology.

*§ 16. Specialising is the main feature of modern philology.*

All these are now studied as separate branches and there are recognised specialists in each of these. Not only this, but each family of languages has its own specialists in philology, and in important families like the Indo-European, even each branch has its special students and its own special magazines and literature.

[1] The word means literally "primitive history".

# CHAPTER II

## History of Linguistic Studies in India and in the West

### A. LINGUISTIC STUDIES IN INDIA

### § 17. *Linguistic Studies in the Vedic Age.*

Every literary and linguistic effort of the ancient races seems to have been inspired by religious motives. This is pre-eminently the case with India. Here we have from the earliest days a mass of sacred literature embodied in the Vedic hymns of which every syllable was carefully preserved. In the course of ages, when the language of the Vedic hymns came to be forgotten, attempts were made to understand the Vedic speech clearly and from that date begins the study of linguistic phenomena in India, which was destined in later ages to produce the most complete grammar and the most exhaustive analysis of any language of the world.

#### (*a*) *The Pada-text.*

The first step was taken when the *Samhitā*-text of the Vedic hymns was reduced to the *Pada*-form. In the latter form each word is shown separately and each compound is analysed into its components. In order to achieve this rules of phonetic combination, rules about the accent system and rules for the formation of compounds (समास) had to be clearly understood. This resolution of the *Samhitā* into the *Pada*-form was the first step in the analysis or

*ryākaraṇa* of the Sanskrit speech. "The very name *ryākaraṇa* indicates the method pursued".[1]

### (*b*) *The Prātiśākhyas.*

After this analysis proceeded apace, we have in the *Prātiśākhyas* the first treatises on phonetics. The ostensible purpose of these treatises is to teach how to chant the Vedas, but they contain a lot of very valuable information regarding the language. The most valuable portions of these works are, (i) the classification of Sanskrit sounds and (ii) the *Gaṇas*, or lists of words which are in any way remarkable grammatically. The classification of Sanskrit sounds found here is substantially the same as is recognised to-day in Sanskrit grammars and it shows a high degree of scientific precision and analytical skill. It was the *Prātiśākhyas* that arranged the Sanskrit sounds in their perfectly natural and scientific order.

### (*c*) *Yāska's Nirukta.*

The next great landmark in the history of linguistic studies in India is the great etymologist Yāska.[2] He was by no means the first etymologist in India. The writers of the *Brāhmaṇas* were among the first to make an attempt to discover the meaning of some of the Vedic passages. But even at that early date the Vedic dialects had become obsolete and the *Brāhmaṇas* interpreted the

[1] Rapson, "In what degree was Sanskrit a spoken language?" *J.R.A.S.*, July, 1904.

[2] I have on purpose omitted the dates here, because Sanskrit chronology is still in a very unsettled condition. I would refer the curious student to special treatises dealing with the history of Sanskrit Literature for a discussion of the dates of the various works and authors mentioned here. They followed each other in nearly the order indicated here.

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*mantras* in a manner which fitted in with their own ceremonials and their own legends and myths. In consequence we got many fanciful explanations given which are felt to be wrong even by the most casual reader.[1] But Yāska in his *Nirukta* is far more scientifically minded than any of his predecessors. His investigations in the field of Vedic etymology are of great interest and even now of some value. And he has the rare virtue of freely acknowledging when he is not quite sure of the correctness of his results. For even in his days the Vedas were of such hoary antiquity that people thought them to be practically eternal. Yāska has not done much work in grammar as such, but he seems to have had more than an inkling of the fact that all words are ultimately to be traced to a certain number of roots.

### (*d*) *The Nighaṇṭus.*

With Yāska we might also mention the authors of the various *Nighaṇṭus*. These works are collections of rare and obscure Vedic words. There seem to have been a large number of these collections and Yāska seems to have had at least five such before him.[2]

### § 18. *Pre-Pāṇinian grammarians; the Aindra School of grammarians.*

After the time of Yāska, who might be taken as marking the culmination of the linguistic studies of the Vedic age, we have a large number of grammarians mentioned, but in most cases their works are entirely lost

[1] Such, for example, is the phrase ऋषाप which the *Ait. Br.* understands to be ऋ-षाप and explains accordingly, instead of ऋष-ऋष which it really is.

[2] Macdonell, *Sanskrit Literature*, p. 269.

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to us. There are two names, Āpiśali and Kāśakṛtsna, mentioned as founders of grammatical schools and one of the later writers, Kaiyyaṭa, quotes certain passages from both of them, but that is all the information we have about them.[1] Then there was the *Aindra* school, which was, as tradition says, supplanted by Pāṇini.[2] In the Aindra school the greatest name is that of Kātyāyana. The school took its name from the god Indra, who is mentioned in the *Taitt. Sam.* (VII. 4.7) as the first grammarian.[3] The Aindra school apparently had a very important share in the development of linguistic studies in South India and Tamil grammars have been considerably influenced by it.[4] It is, however, remarkable that no important work of the Pāṇinian school mentions the Aindras by name. This would seem to imply that the name Aindra was of a later date. But the terminology and the methods of this school are decidedly of a more primitive and less developed type than those of Pāṇini.[5] This would lead us to the conclusion that "the Aindra school is post-Pāṇiniya in date though pre-Pāṇinīya in substance. Possibly it may be no other than the Kātantra school".[6]

## § 19. *Pāṇini.*

A long interval separates Yāska from the greatest grammarian of India (one might almost say, of the world),

[1] Belvalkar, *Systems of Sanskrit Grammar*, § 8.

[2] The Chinese pilgrim Hiuen Tsang and the Tibetan Tārānāth both mention this tradition ; see Belvalkar, op. cit., § 9.

[3] Quoted by Belvalkar, loc. cit.

[4] For a full account of the Aindra School see Burnell, *Essay on the Aindra School of Grammarians.*

[5] It may be noted that we find many of the technical terms of Pāṇini even as early as in the works of Yā-ka.

[6] Belvalkar, loc. cit.

Pāṇini.[1] His was indeed a master-mind and he struck out a path entirely original. The whole of his work depends on the *Śiva-sūtras* where the *pratyāhāras* (i.e., the terminology he is going to adopt) are set forth. It is these fourteen *sūtras* that mark him out to be entirely distinct from any of his predecessors. But though he introduced many new technical terms and practically a new method of analysis, he did not entirely break with the previous systems of grammar. He accepted many of the older terms. By his masterly analysis he arrived at the fundamental conception of roots—which are a set of monosyllabic constants, each a concept and each expressing an action (क्रिया). He also shows by his three-fold division of parts of speech[2] that he recognised the fundamental principle that the sentence is the unit of language. To this day Pāṇini remains the most thorough and the most nearly perfect analysis of any language in the world. Many have tried to imitate, but none have surpassed him. His influence upon the Sanskrit language has been wonderfully deep and lasting, and, except (in a far lesser degree) for Hemacandra, his has been the only instance of a grammarian, pure and simple, practically dictating what a language should be. Pāṇini has been exalted in India to a rank far above that of a mere human writer, as an equal of the great sages who uttered the sacred lore of the Vedas.

### § 20. *The influence of Pāṇini on the subsequent growth of Sanskrit.*

The influence of Pāṇini's grammar upon Sanskrit was immense. It has been said that "grammarians have

[1] Perhaps the finest study of Pāṇini is by Goldstücker.

[2] See below Chapter VIII.

absolutely no authority to prescribe what is 'right' or 'wrong,' but can merely state what is the actual usage, and that they are good or bad grammarians as they report truthfully on this point". [1] But this dictum cannot be applied to Pāṇini. He has been, by the unanimous opinion of his successors, invested with that authority as far as Sanskrit is concerned. This has been due to two reasons. First of all the *Aṣṭādhyāyī* was undoubtedly the unique achievement of a great analysing mind, unparalleled in the history of human thought, and as such it deserved a unique method of recognition. In the second place the language which was analysed by Pāṇini, had, already in his own days, acquired a peculiarly sacred character in the minds of the public. And thus a religious authority was, as it were, added to that of Pāṇini himself in determining what was "right" or "wrong" in Sanskrit. The inevitable result of this twofold sanctity attaching to the work was that since his days the process of death had begun for Sanskrit, although it took many generations, perhaps a few centuries, before it ceased completely to be used as a vernacular. Language is a human institution and just because of this it has to be thought of as *a living and growing* organism. It must be flexible enough to express every phase in the mentality of the people who use it. It must change with their change, it must grow with their growth and progress. Hence rigidity in any respect is inevitably fatal to the continued use of a language as the speech of the common people. What Pāṇini had intended to do was merely to analyse (वि-ख्या-अ) the language as he found it in his own day. It is not to be disputed that in his time it was a language spoken by the common people.[2] It was his

[1] H. C. Wyld, *Historical Study of the Mother Tongue*, p. 3.

[2] Rapson, op. cit., note 1, p. 20 above.

subsequent reputation, added to the sanctity of the literature embodied in the language, that gradually turned what had been a mere statement of fact into an unchangeable and rigid rule of "correct speech".[1] The consequence was that Sanskrit got rigid at the very core and it "died", i.e., it ceased to be used as a *living* language by the common people to express their thoughts and emotions. Of course it has always been, and is even now, cultivated by the "learned" (the *śiṣṭas*) and it still serves as a medium of polite intercourse between them. But the life has gone out of it and there is a certain degree of artificiality, or rather a want of spontaneity, about its use in "classical" times, which contrasts rather sadly with the vigour of the Vedic speech.[2]

### § 21. *Sanskrit grammarians after Pāṇini belonging to the Pāṇinian School.*

The great fame of Pāṇini practically extinguished every other school of Sanskrit grammar in this country. In fact except a few names[3] (and these of minor importance) all the work done since in Sanskrit Grammar is based on Pāṇini, and even these exceptions accept in a large measure his methods and his nomenclature. In fact most of the work done since his time has been in the nature of commentaries on the *Aṣṭādhyāyī*, or a re-arrangement of the contents of that work. Thus while Pāṇini is the very flower of grammatical studies which had begun with the *Pada*-text, he is the first and the greatest of a school of

[1] As to what is correct speech see below, Chapter IV.

[2] "Sanskrit would become the spoken language of India if all editions of Pāṇini's grammar were drowned", says Govind Śāstri Pardeśi; and, he may have added, if every Pandit who remembered Pāṇini's Grammar were exiled.

[3] For details see Belvalkar, op. cit.

grammarians, which since his time has practically held the field undisputed. We may mention only a few important names here.

### (*a*) *Kātyāyana.*

The first name is that of Kātyāyana. Tradition makes him, indeed, the senior of Pāṇini,[1] but little reliance can be placed on this. We must allow an interval of at least a few centuries between them. As we have already mentioned, Sanskrit was a living language when Pāṇini analysed it and it continued to be so for a considerable period after him. Indeed the effect of his grammar began to be apparent only some generations later,[2] for the inherent vitality of the language had carried it forward with the growth of the people. And necessarily the language had changed as every living language must change. Hence, by the time of Kātyāyana it was found necessary to supplement Pāṇini, to correct him in places and, in general, to re-edit the work to suit the changed conditions. He sets about amending Pāṇini and he takes only those *sūtras* which he thinks require such treatment. He does that in the *vārttikas*, and whatever statement he makes, he always gives reasons for them. But in many cases he seems to have misunderstood Pāṇini.[3] He seems to have belonged to a different school (probably the Aindra) and Patañjali definitely calls him a southerner. Kātyāyana had many predecessors in his work of criticism whom he quotes. He was also succeeded by several others, most of whom are known to us only by name.

[1] See Burnell, op. cit.

[2] Even as late as the time of Kālidāsa we find a vigour and a spontaneity in the language which can only be found in a living speech. The gradual approach of "death" due to rigidity is, however, quite apparent at that period.

[3] As pointed out by Patañjali, see Belvalkar, op. cit., § 18.

### (*b*) *Patañjali.*

Patañjali is the greatest name among Sanskrit grammarians after Pāṇini. His great work was the *Mahābhāṣya*, which is in reality a defence of Pāṇini against the criticism of Kātyāyana and at the same time supplements of the former's work wherever he thought it necessary. He also attacks Kātyāyana's work rather severely. But the main importance of the *Mahābhāṣya* lies in the treatment of the principles of grammar enunciated there. This great work has been closely studied and has several very important commentaries written upon it.

## § 22. *The "Three Sages" of Sanskrit Grammar.*

These three—Pāṇini, Kātyāyana and Patañjali—are the three sages (मुनित्रय) of the science of grammar. They represent the high-water mark of grammatical research in India. After Pātañjali the Pāṇinian school is chiefly represented by numerous commentaries and commentaries on these in their turn and so on to several degrees.

## § 23. *Commentaries on Pāṇini.*

We can here merely mention some of the important commentaries on the main work of Pāṇini.

### (*a*) *Kāśikā-vṛtti of Jayāditya and Vāmana.*

The work known as *Vṛtti-sūtra* but popularly called the *Kāśikā* is the joint work of the two scholars Jayāditya of Kashmir and Vāmana. It is a running commentary on the *Aṣṭādhyāyī* in a very lucid style and furnished with numerous examples. Another notable feature of this

work is the incidental information supplied regarding many writers, now entirely forgotten but doubtless well-known to and studied by the authors. The *Kāśikā* has several important commentaries attached to it.

### (*b*) *Pradīpa of Kaiyyaṭa.*

Kaiyyaṭa's *Pradīpa* on the *Mahābhāṣya* may be noted here as a fairly successful work. This work marks the end of an epoch in the history of Pāṇinian grammar. By this time Sanskrit had long become a "classic", i.e. practically a "dead" language and had ceased to be influenced by the popular idiom. Then again Moslem invasions had begun and during the chaos of five or six centuries which followed no great work could be produced. In fact we do not get any work of merit till the days of the Moghals, when, with the establishment of peace, education and learning began once again to flourish.

### (*c*) *Siddhāntakaumudī of Bhaṭṭoji Dīkṣita.*

It was then found that the study of Sanskrit grammar when it was a living language must differ considerably in its methods and order from its study as a "dead" language used only by the learned few. Consequently it was found that the arrangement of the *Aṣṭādhyāyī* were unsuitable and there was a demand for re-arrangement of Pāṇini's *sūtras*.[1] Hence we get a series of works known as the *kaumudīs*. The most famous of these is the *Siddhāntakaumudī* of Bhaṭṭoji Dīkṣita. This is now practically universally used in India for the study of Pāṇini. Bhaṭṭoji himself wrote a commentary on his own work and there are a host of others by various writers.

[1] For details see Belvalkar, op. cit., § 29.

### (*d*) *Nāgoji Bhaṭṭa.*

The *Paribhaṣās* of Pāṅini's grammar found a commentator in Nāgoji Bhaṭṭa in his work called the *Paribhāṣenduśekhara*. Nāgoji was a voluminous writer and he has written at least a dozen works on grammar besides several on Dharmaśastra and other branches of learning. Nāgoji is practically the last great writer[1] on grammar of the Pāṇinian type. After him the study degenerates rapidly into a writing of easy text-books and "cribs" for the use of the average student.

## § 24. *The Philosophy of Speech Created by the Naiyāyikas of Nadia.*

One point, however, deserves mention. The rise of the logicians at Nadia gave an impetus to the study of the psychological aspect of language. The Nyāya philosophy definitely included *śabda* (or speech) as one of the means of knowledge and in the process of drawing inferences an accurate idea had to be obtained of the capabilities of language for that purpose. Hence there grew up a special section of a very abstruse branch of linguistics, partly semasiological and partly pure dialectics, which found great favour in Bengal. The best representative work of this school is the *Śabdaśaktiprakāśikā* of Jagadīśa Tarkālaṅkāra, a very modern work.[2] The book is of an extremely abstruse treatise on the

[1] Prof. Berthold Liebich of the University of Heidelberg once told me that he claimed direct गुरुपरम्परा descent from Nāgoji. He himself was a pupil of Kielhorn, and a Kielhorn was a pupil of a Pandit who traced his "grammatical descent" (if we may use this phrase) from Nāgoji.

[2] See Satis Chandra Vidyabhusana, *A History of Indian Logic.*

philosophical and psychological aspects of the Sanskrit language. Many points regarding semantics are discussed there at length.

### § 25. *Other Schools of Sanskrit Grammar.*

It is not necessary here to go into details about the other Schools of Grammar in Sanskrit.[1] The more important of the surviving schools might, however, be mentioned here by name. They are all later than Patañjali, and some of the very minor ones are quite modern. The earliest is the Kātantra school which is, as mentioned already, thought by some to be the same as the Aindra school. The schools of Candragomin and Jainendra are definitely sectarian in their object. The school of Hemacandra and that of Bopadeva, however, deserve special mention.

### § 26. *Hemacandra.*

Hemacandra was a very holy Jaina monk who had a considerable share in the shaping of the history of Gujarat. He was a man of great culture and encyclopædic learning. He has left many works on many subjects on each of which he has left a lasting impress. He wrote his grammar, the *Śabdānuśāsana*, with the object of saying "in the shortest possible manner not only all that his predecessors had said upon the subject, but everything that could be said".[2] As a work on Sanskrit grammar it was a failure, partly because of the sectarian bias of the writer. But

[1] The details are to be found in Belvalkar, op. cit. Also Colebrooke gives an account of various Sanskrit Grammarians in an essay printed among his *Miscellaneous Essays*, Vol. II.

[2] Belvalkar, op. cit., § 58.

the last book (the fourth) of this grammar deals exclusively with the Prākrit dialects of his day and that part constitutes his best claim to remembrance here. This Prakrit grammar of Hemacandra did for Jaina Prākrit, though on a limited scale, what Pāṇini's *Aṣṭādhyāyī* had done for Sanskrit. It made that language rigid, and the language (which even then was passing out of use as a vernacular), "died" as a result of Hemacandra's work. Moreover the reasons were the same as in the former case, viz., (1) the great fame and religious sanctity of the author and (2) the sacred character of the literature embodied in that language.

## § 27. *Bopadeva.*

The school founded by Bopadeva has found a permanent place in Bengal and his *Mugdhabodha* has been regarded as a standard work. This was really an attempt at simplifying the grammar of Pāṇini for the understanding of *Classical* Sanskrit. All Vedic peculiarities (including accentuation) are stricly avoided.[1] It was, moreover, a distinct attempt to represent the orthodox Brāhmanical point of view as opposed to the sectarian schools of the Jainas, the Bauddhas and other heterodox people. For this purpose he illustrates his rules with examples from Brāhmanical mythology and he "has taken care to use whenever possible the names of Hari, Hara and other gods" with equal impartiality.[2] He has considerably simplified the system of Pāṇini and has had to deviate considerably from him in the use of technical terms.

[1] The only reference to Veda is in the last sutra बहुलं ब्रह्मणि corresponding to Pāṇini's बहुलं छन्दसि ; see Belvalkar, op. cit., § 83.

[2] Ibid.

## B. LINGUISTIC STUDIES IN EUROPE.

### § 28. *Language study in Ancient Greece.*

So far we have been dealing with the indigenous grammarians of India entirely unaffected by any external influences. Before we can appreciate the modern tendencies of linguistic studies in India we must glance rapidly at their history in the West, for the modern tendencies are a direct outcome of the Western influence.

Greece has always been regarded as the fountain-head of all Western culture, and though the study of grammar and language first commenced with a study of the Greek tongue, the Greeks themselves contributed nothing whatever to the formal study of any language, not even their own. They had a supreme contempt for any one not speaking Greek (which they regarded as the only tongue fit for the use of cultured beings) and they called all such foreign people βάρβαροι.[1] As to their own language they thought that a man learnt his own mother-tongue inhesitively and that he had no need to be *taught* specially anything about it. They paid great attention, however, to the art of debate and to rhetoric and both these formed an essential part of their educational system. But language as such they never studied.

#### (*a*) *Aristotle.*

But their great philosophers had naturally something to say about language and Aristotle's work in this respect is remarkable for the deep insight he has shown in the

[1] So great was this prejudice against any foreign-sounding speech that even the Macedonians, who spoke an outlying dialect of Greek itself, were included under the term.

analysis.[1] Aristotle's analysis is distinctly from the point of view of the philosopher and the logician. But his classification is of immense importance to us, because in the science of language, as in everything else, he was the first great exponent. His classification and his nomenclature is the one we still use in our grammars, though a good deal misunderstood, perverted and misapplied. For example the terms "subject", "predicate" and "copula" are taken directly from his formal logic. It is a pity that such has been the case, because, far from making matters clearer, this nomenclature vaguely understood and even more vaguely applied has been at the root of a great deal of confusion in our grammars.[2] It is somewhat unfortunate that in modern India too we have taken up these unscientific and vague "parts of speech" from Europe, although there is the much more accurate classification of Pāṇini into the three groups तिङन्त, सुबन्त and अव्यय.

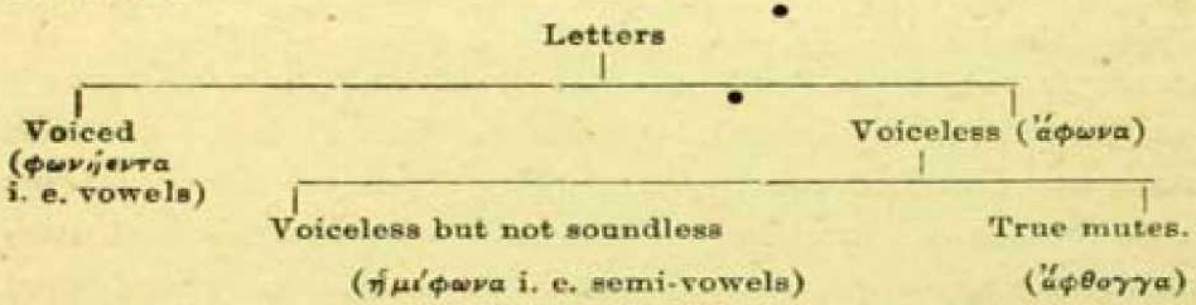
### (*b*) *Plato.*

Plato has incidentally dealt with language in his philosophical Dialogues. He has some pertinent remarks to offer on the relation of thought and speech. He says in the *Sophist*, "thought (διάνοια) is the same as language, with this exception, that thought is the conversation of the soul with herself which takes place without voices, while the stream which, accompanied by sound, flows from thought through the lips, is called language (λόγος)".

[1] He deals with this in the twentieth chapter of his *Poetics*.

[2] A sort of religious sanctity seems to have attached itself even to the number (eight) of the "parts of speech", and any one suggesting any other style of classification was, not so very long ago, regarded almost as a heretic. The same overlapping of logic and grammar and the same resulting confusion is to be observed in the linguistic speculations of the Nadia logicians of Bengal (see above § 24).

He repeats this belief in the identity of thought and language in the *Theaetetus* (190), where he says, "to form an opinion is to speak, and opinion is a word spoken, I mean, to oneself and in silence, not aloud, or to another". In his *Cratylus* he analyses the Greek sounds phonetically as under :—




The same classification was extended by later grammarians of the Greek language by dividing the true mutes into (*a*) ψιλά (tenues), (*b*) μέσα (media), and (*c*) δασέα (aspiratæ). And this is the phonetic classification which still holds in Europe to-day.

## § 29. *Early European Grammarians : Dionysios Thrax, Appolonius Dyskolos and Laurentius Valla.*

The first grammar ever written in Europe was by the Greek Dionysios Thrax (2nd cent. B. C.) who wrote it in order to instruct his Roman pupils in his own mother-tongue. He based his analysis upon the Aristotelian system, and his method is essentially the same as is still used in European. His successor Appolonius Dyskolos is notable chiefly for his systematic treatment of syntax. After these two writers and taking them as models the Romans, in their turn, started analysing their own language and a number of Latin grammars were written. The Romans too, like their teachers the Greeks, paid special attention to oratory and rhetoric and for them the great Greek writers were the models. And long after the

Roman Empire in the West had fallen before the Goths the study of both these classical languages continued to be pursued. The Latin grammar of Laurentius Valla (1440) was a great authority even up to the 18th century. It was completely Aristotelian in spirit and in nomenclature.

### § 30. *Influence of Christianity.*

But the chief event in Europe during the centuries succeeding the fall of Rome is the growth of Christianity. The study of Christian scriptures was the principal incentive to all intellectual work, and various languages were studied in order to elucidate the sacred books of that faith. Thus both Hebrew and Greek were cultivated. Closely associated with these were the various other languages, Syriac for certain special versions of the scriptures, and Latin for the writings of the great Christian theologians of the middle ages, for Latin was at that period the universal language of the learned. Arabic also was studied early, partly in connection with Hebrew, and partly as a result of the Crusades. The net result of the study of all these languages was that scholars began to realise very early that Latin and Greek were very closely related.[1] Arabic, Syriac and Hebrew also were observed to form an even more closely related group. And the study of the latter group led directly to theory of roots

[1] This fact was certainly recognised by the Romans also. It is a pity that Sanskrit Grammarians did not come into closer touch with other people speaking a kindred language. The Persians and Greeks were in India a comparatively short while, and they were succeeded by a long series of foreign and barbarian invaders. This probably is the reason why the closeness of other languages to Sanskrit was never recognised by Indian writers. The nearness of the various Prakrits and of the various Vernaculars has been noted by Hemachandra and other writers on Prakrit.

being the ultimate foundations of language. But while Christianity gave such a great impetus to the study of foreign languages, the orthodox theology of the church was responsible for some very wrong notions, which crop up occasionally even now. Thus, for example, it was always thought that Hebrew was the "mother" of all languages and many ingenious and beautiful, but wholly unscientific, proofs were given to derive Latin and Greek words through Hebrew.[1]

### § 31. *The introduction of Sanskrit into Europe.*

But Comparative Philology as we now know it was not known to Europe until Sanskrit was introduced to the notice of European scholars. "Comparative Philology was born on the day when Sanskrit was opened to the eyes of the Western world. The enthusiasm that stirred the hearts of those first pioneers into the realm of India's sacred language and India's ancient lore still throbs in the veins of their followers to-day and will quicken the pulse beat of inspired workers for generations to come"—such are the enthusiastic words in which Jackson has described the effect of the first view of Sanskrit by European scholars.[2] It opened out a new world, as it were, and for the first time the scholars of Europe realised that all the important languages of Europe as well as those of Persia and India were really members of one family. From this time onward Philology as we know it to-day begins.

[1] Exactly the same sort of attempt is often made by some Indian writers to make Sanskrit the "mother", not only of the Indo-European, but of *all* languages. Thus I have read in a serious essay about the derivation of the Arabic word *kitāb* from पुस्तक. The Arabs read from right to left hence they read the Sanskrit word as कस्तप् from whence क-त-प and *kitāb* !!

[2] A. V. W. Jackson, *Philology*, p. 9.

## § 32. *The laying of the foundations* (*1786-1833*).

### (*a*) *Sir William Jones* (*1746-1794*).

The first foundations were laid by Sir William Jones in the year 1786, when at the foundation of the Royal Asiatic Society in Calcutta, he definitely pointed out the main features of the new branch of knowledge opening out before the European world. He said:

"The Sanskrit language, whatever be its antiquity, is of wonderful structure, more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either; yet bearing to both a stronger affinity, both in the roots of verbs and in the forms of grammar, than could have been produced by accident; so strong that no philologer could examine all three without believing them to have sprung from some common source, which perhaps no longer exists. There is a similar reason, though not quite so forcible, for supposing that both Gothic and Celtic, though blended with a different idiom had the same origin with the Sanskrit".

### (*b*) *Henry Thomas Colebrooke* (*1765-1837*).

The work which Jones inaugurated prospered and very swiftly grew into a definite science. One of the earliest Englishmen to take up the study was Henry Thomas Colebrooke, who has been perhaps the best of the English Sanskritists. He was a man of great learning and he has left his mark on almost every branch of Sanskritic research owing to the width and depth of his scholarship.

### (*c*) *Friederich Schlegel* (*1772-1829*).

The greatest amount of work in the science of Philology, however, has been done in Germany. The story of

the first German Sanskritist is a romance of the Napoleonic Wars. Friederich Schlegel was in Paris in the year 1803, where he made the acquaintance of a young British soldier, Alexander Hamilton, who had been made prisoner of war on his way home from India. Hamilton had made good use of his time in India by studying Sanskrit and though he never did any remarkable work as an Orientalist himself, he started the movement in Germany by teaching Sanskrit to Schlegel. It was the latter who first pointed out to German scholars the importance of Sanskrit to students of Philology and he also pointed out the right direction for such a comparative study.

### (*d*) *Wilhelm von Humboldt* (*1767-1835*).

F. Schlegel was the first Sanskritist in Germany but the real founder of the science of Comparative Philology—in the sense that he first laid down the principles which have since completely guided and dominated these studies—was Wilhelm von Humboldt. A man of amazing versatility, he was above all a statesman and politician; but he found time to study languages and to write several works on the study of language. These works do not contain any remarkable discoveries in Philology[1] but they show a remarkably broad outlook upon the subject and a very clear grasp of what such a science should become. His point of view is essentially historical and sane. He regards Philology as a part of the wider study of mankind. Language, he maintains, is not a thing created or artificially made, but is an energy found in human beings, a manifestation of the Divine Life in man. He is very emphatic in the statement that the beginning and the end of all things are hidden from human eyes and hence we can contemplate only

[1] Except perhaps his remarkable work on the Kawi-language.

the stages in the middle.[1] Therefore, he holds, we need not trouble about the origin of speech and thus lose ourselves in the mazes of speculation. Let us take it for granted that man speaks because speech comes natural to him, sound links itself to his thoughts and as it were wells out from him. Humboldt also had a clear idea that words are traceable to roots and that inflections were originally independent words which were joined on to other words to modify their sense.[2] Throughout his work there runs his great feeling of humanity.

### (*e*) *Adolf Schlegel* (*1767-1845*).

He was the brother of F. Schlegel and was a great authority on Sanskrit, and he it was who gave out the extremely wise advice that the Sanskrit literature ought to be studied with the reverence of the Brāhmaṇa and at the same time with the critical and scientific spirit of the European scholar.[3] He may be regarded as the founder of Sanskrit Philology in Europe.

### (*f*) *Franz Bopp* (*1791-1867*).

We must also mention here the first writer of Comparative Grammar, Franz Bopp. Though his work is now out of date, it has got a great deal of historical interest for us. In 1816 came his first work on *The Conjugation System of Sanskrit Verbs as compared to that of Greek, Latin, Persian and Germanic.* His greater work was published in 1833. It was the *Comparative Grammar of Sanskrit, Zend, Greek,*

[1] Cf. अव्यक्तादीनि भूतानि व्यक्तमध्यनि भारत।
अव्यक्तनिधनान्येव। *Bhagavad-gītā*, II. 28.

[2] See below, Chapter III.

[3] *Indische Bibliothek*, I. 22, quoted by Delbrück in his *Studium der indogermanischen Sprachen*, p. 78.

*Latin, Lithuanian, Gothic and German* and in 1854 he brought out as a supplement to his Comparative Grammar, *A Treatise on the Accent Systems in Sanskrit and Greek.* Bopp believed that the inflections were originally independent words which were used to modify the other words to which they were attached and these gradually lost their independent existence and became mere meaningless suffixes.[1] Of course being the first writer on Comparative Grammar Bopp is by no means accurate; and there were a lot of problems he could not solve. Hence he laid down the dictum that the laws of Philology were true only within certain limits.

### (*g*) *Jacob Grimm* (*1785-1863*).

Jacob Grimm, who so greatly delights all children with his incomparable Fairy Tales, was the first writer of Historical Grammar. His great *German Grammar* began to appear in the year 1819. He considered the subject solely from the historical point of view. He lays great stress on the regular growth of language with the growth and development of the people. His name is specially associated with the famous two "laws of sound-shifting", which he formulated for the Germanic languages.[2] The history of the further development of these laws forms an important chapter in the history of Philology.[3] Grimm clearly pointed out the true historical and scientific method

[1] Just as the word *like* in English became the suffix *-ly*. See Chapter III.

[2] The Danish scholar Rasmus Kristian Rask (1787-1832) had indeed formulated the first law of sound shifting. Grimm however was the first to explain it elaborately. In the 1st edition of Grimm's *German Grammar* there is no mention of the law but in the 2nd edition it is explained. The Grammar of Rask had appeared in the interval.

[3] See below, Chapter IX.

of research, and his own unequalled knowledge not only of the German language, but of the people, and his intimate acquaintance with the heart of his people (as evidenced by his collection of folk-tales) make his grammar very fine reading. He says in his Preface that he was as it were forcibly dragged into writing the historical German Grammar. He says that every word should be traced to its very root and that the living organic principle of its growth should be thus discovered. He regards language as a deep-lying principle of our being, which grows with our growth according to natural laws.[1]

### § 33. *The collecting of the material* (*1833-1855*).

The science was now definitely founded and from 1833 up to about 1855[2] the main characteristic of philological work is the collection of an enormous number of facts. It was a period of a great deal of, what some people call, drudgery. But it was work which was necessary, for only upon the material thus collected was it possible later on to build up the theories of the modern school. In certain respects it is a period also for the first beginnings of some of the modern theories and at least one new branch was definitely founded during these years.

### (*a*) *August F. Pott* (*1802-1887*).

"Scientific etymology owes its origin to August Friederich Pott", says Jackson.[3] His labours are most voluminous. He undertook in his great work—*Etymologische*

[1] Delbrück, op. cit., p. 75.

[2] The period, namely between Bopp's *Comparative Grammar* and Steinthal's book on the mutual relations of Grammar, Logic and Psychology (*Grammatik, Logik, Psychologie, ihre Prinzipien und ihre Verhältnisse zu einander*).

[3] *Philology*, p. 12.

*Forschungen*—to reduce to greater order the great work of Bopp. His method was severely scientific and although he displays a very varied and rich imagination in discovering resemblances, he never allows it to go out of control. We are indebted to him for a large number of very accurate etymologies and he also made the first "table of comparative sounds" which comprised practically all the Indo-European languages then recognised.

### (*b*) *Friederich Max Müller* (*1823-1900*).

Though he did not rank very high as a philologist (i.e. in the domain of comparative or historical grammar), Max Müller has a great many claims upon our gratitude. He was the first to make this subject popular and even to-day in spite of a good deal of doubtful philology and half-true conclusions his lectures on *The Science of Language* form very fascinating reading. His most valuable works scientifically are his great edition of the Rigveda, with Sāyana's commentary (1849-75), and the great undertaking of the fifty volumes of the *Sacred Books of the East*. He founded the science of Comparative Mythology and Religion, and his contributions to Urgeschichte too are of value, although occasionally his conclusions are more poetic and imaginary than scientific.[1]

### (*c*) *Rudolf Roth* (*1821-1895*), *and* (*d*) *Otto Böhtlingk* (*1815-1904*).

Another great work was begun towards the end of this period which has proved to be of immense help to all students of language. It was the great *St. Petersburg*

[1] That was probably due to the poetic strain in his heredity; his father was one of the well-known poets of Germany. Whitney has been his most unsparing, yet, on the whole, his most just critic.

*Dictionary of Sanskrit* compiled by the labours of Roth and Böhtlingk. It tries to trace to its root every word given therein.

### (e) *August Schleicher (1823-1868).*

The great dominating figure of this period is August Schleicher. He came practically at the end of the period and his greatest work the *Compendium* actually falls outside the period.[1] He gathered together the work done during this period and put it in an organised form. This remarkable work consisted of a "portrait sketch of each member of the Indo-European family, with an outline picture of the Aryan mother in the background".[2] His results are no longer tenable in the light of later research and no one now professes to be able to compose in the parent Indo-European speech as he used to do, but still his work points out the path for the future and makes a decided advance on the work of Bopp. He also believed that Philology was more a natural[3] than a historical (or human) science.

## § 34. *The Junggrammatiker (1855 onwards).*

### (a) *H. Steinthal (1825-1899).*

The year 1855 saw the publication of a work by a young man named Steinthal. The work was by no means a very remarkable one, but it seemed to open out a new way for philologists. It dealt with the mutual bearing of grammar, psychology and logic upon one another.

[1] It was published in 1861. The full title is *Compendium der vergleichenden Grammatik der indogermanischen Sprachen.*

[2] Jackson, loc. cit.

[3] Jackson (loc. cit.) points out that he was himself a natural scientist and that his philosophical bias was Hegelian.

Steinthal was the first scholar to point out the importance of psychology for the student of languages. The new era of psychological philologists did not begin definitely with Steinthal's book, but it was perhaps the earliest work indicating the new tendency. At that time, and for another twenty years or so, Schleicher was the great master of European philologists. It was in derision that the name *Junggrammatiker*[1] was given to them. Their insistence on psychology was their main point of difference from the older people. The great fame of Schleicher prevented the spread of their views for some time, but slowly and surely the truth that was in them forced itself upon the learned world and the young grammarians triumphed in the end. Steinthal's psychology started it, and it was carried on in the first instance by Leskien, the famous scholar of Slavic-philology.

### (*b*) *Hermann Osthoff*, (*c*) *Karl Brugmann and* (*d*) *Hermann Paul*.

The real struggle of the Junggrammatiker has centered round three great names all of whom are living at present—Osthoff, Brugmann and Paul. The former two were long associated together as workers and their joint work *Morphologische Untersuchungen*[2] (Vol. I, 1878) is the pioneer work of the new school. Brugmann is recognised as the greatest of the living philologists and he has worked out of the vast *Grudriss der vergleichenden Grammatik der indogermanischen*

[1] i.e. the "young grammarians", the adjective implying both new-fangled as well as wanting in years and wisdom. This new school started in Leipzig, where the greatest of modern philologists, Karl Brugmann, still lives.

[2] i.e. Morphological Researches. The whole work is in five volumes.

*Sprachen* (Vol. I, in 1886).[1] Paul is the famous exponent of the principles and philosophy of speech. His epoch-making work *Prinzipien der Sprachgeschichte* (the Principles of the History of Language) is the standard book on the subject.[2]

### (e) *W. D. Whitney (1827-1894).*

Whitney was the first American philologist of note. He dealt with language as a human institution and hence to him Philology was a part of historical or "moral" science. He emphasised the fact that language is the reflection of a nation's mind. He is the sanest and most level-headed writer in English on the general principles of the science and has done much to counteract some of the imaginary and poetical theories of Max Müller.

### (f) *B. Delbrück.*

The Junggrammatiker are still, as it were, in their first youth. It would be a task much beyond our present purpose to enumerate many of these writers. But Delbrück must be mentioned. He has collaborated with Brugmann in his Comparative Grammar and has brought out the three volumes on Syntax. In fact he is the founder of and the greatest living authority on Comparative Syntax. His knowledge of Greek, both ancient and modern, is unsurpassed by any scholar and to this he adds a profound knowledge of Sanskrit and Latin.

[1] The whole in five volumes. The last three are in association with Delbrück and deal with Comparative Syntax.

[2] Translated into English by H. A. Strong; also adapted for English (principally) by H. A. Strong, W. S. Logeman and B. I. Wheeler.

### § 35. *The chief characteristics of the modern school of philology.*

The Junggrammatiker have laid great stress on the following points and have been consistently observing all of them in their work :[1]

(*a*) *Study of living languages is regarded as equal in importance to that of the "classical" ones.*

They have recognised the importance of *living* languages to the philologist. These are what we can hear every day and can study at first hand and can also side by side observe the people who speak it. Thus we get a real insight into the connection between the language and its speakers. This point is of supreme importance in all solid philological work.

(*b*) *Problems of ultimate origins are regarded as insoluble in the light of our present knowledge.*

The older writers devoted a lot of energy to the ultimate problems of language, for example, to matters relating to the origin of speech, the linking of sense and sound in roots and so forth. Modern scholars seem to think that Humboldt was wiser in maintaining that the beginning and the end are unknowable, and that we have to deal only with the middle (i.e. the manifested) aspect of the phenomena of speech. The time thus saved is devoted to other and more practicable investigations.

[1] Adapted from Jackson, op. cit.

### (c) *The physiological and psychological aspects of speech are sharply distinguished.*

The production of sound is due to the vocal organs and to the mere physical variation of sound, i.e. the phenomena of sound-change can be very well explained by the mere mechanical laws of physiology. Such was the older idea; but the new school maintains that it is a human being who speaks and that his mind also works simultaneously with his vocal organs. No speech can exist without *both* these elements—the physiological and the psychological, or the mechanical and the mental—being present. The former can be accurately measured and is calculable for any language at any period of its history. The latter is an uncertain factor, which does not depend on any rule which could be definitely formulated. It is this aspect of speech which is mainly responsible for the irregularities in language. But though these irregularities can never be brought under a definite law they can always be explained as the result of the working of human thought and in accordance with well-known laws of psychology.

### (d) *Analogy is admitted as an important factor in language growth.*

Directly following from the preceding consideration is the admission of *analogy* as a very important factor in language growth. The human mind likes to think of things in an ordered fashion where each thing has its proper assigned place. It also expects that things which are similar, are to be associated together in closely related groups. And here the influence of analogy is very clearly marked.[1]

[1] See below, Chapter V.

(e) *The mixing of dialects is considered to have had a great influence in the history of a language.*

No great human race can live and grow in an entirely segregated corner of the world and remain uninfluenced by other races around them. Races must mix together. They did so in the past and the mixing is still going on. When races mix their languages must mix too and this fact in the history of a people is recorded clearly in the mixture of dialects that results. In other words a "pure dialect" is an impossibility in nature.

## C. THE MEETING OF THE EAST AND THE WEST.

### § 36. *The new movement in India.*

The two streams of linguistic study from the West and from the East, are seen to be uniting at present in India.[1] The new movement has come to India to stay and from the beginnings thus made we may expect in the future to have a really splendid school of philologists. We may surely then expect the realisation of Adolf Schlegel's ideal that the languages of the East should be studied in the reverent spirit of the Brāhmaṇa and in the critical spirit of the Western philologist. The movement dates in India practically from the year 1877 when Bhandarkar delivered his famous *Wilson Philological Lectures*[2] in the University of Bombay. But till within the last ten years

[1] India seems to be destined to achieve within herself and in the near future a blending of the Eastern and the Western types. And this is not merely in the region of linguistic study, but in every department of human activity.

[2] This endowment was founded to commemorate the educational work of the late Rev. Dr. John Wilson in Bombay. Wilson was a man of great learning and an even greater heart.

or so the movement was not very strong here. In the year 1908 the Government of India instituted for the first time scholarships for young scholars of Sanskrit and Arabic to go out from India to the West and learn western methods of criticism and research, and taking advantage of this many young Indian scholars went over to England and Germany[1] and France; and since they have came back they have been trying their best to spread the ideas and methods in India. The movement is too recent and the workers too young at present to enable one to criticise their work. Time alone can prove their worth. It would be invidious to mention any of these Junggrammatiker[2] among the Indians, but before we can consider the movement in detail we must say a few words about the father of this movement in India, who happily is still living (though in complete retirement) to inspire us with his learning and his great example.

### § 37. *Sir Ramakrishna Gopal Bhandarkar (born 1837).*

Sir Ramakrishna Gopal Bhandarkar has been the *guru* of many of us personally, either directly or one degree

[1] Of course, during the War no new Indian scholars could go to Germany, but those that were already there were allowed by the German Government to continue their studies under certain restrictions required by the military. After the signing of the Peace Treaty the British Government has not as yet (1921) thought it advisable that Indian students should go to Germany for study. It is however to be hoped in the interest of pure scholarship that this restriction will be removed at the earliest possible moment.

[2] I use this name advisedly for our young workers for two reasons: (i) they are certainly the disciples of the German Junggrammatiker, some having studied directly under some of the most famous of the German scholars like Brugmann, and (ii) they too like their German namesakes are looked upon as "new-fangled" by the orthodox Pandit schools here. Besides, they are all quite young.

removed[1]; and he certainly has inspired us all. He was practically the first in India to study philology according to the western methods and his *Wilson Philological Lectures* of 1877 was the first great work by an Indian philologist in the western style. He has also been the pioneer for teaching Sanskrit Grammar according to western methods. How far he has been successful may be judged by the fact that his two books of Sanskrit are practically universally used all over Western India.[2] His fame however does not rest so much in the domain of philology but in archæology, epigraphy and ancient history. His pupils and admirers have founded the Bhandarkar Institute at Poona in the year 1917 to celebrate his eightieth birthday, and it promises to become a centre for the new school in India.

### § 38. *Tendencies of the Junggrammatiker of India.*

A few words may be added regarding the main tendencies of this new movement and a few indications might also be given regarding the direction of our future work. Of course the first need is to create students and workers.

#### (*a*) *Study of the Vernaculars.*

In the first place like our European teachers we shall have to work out the problem of our Vernaculars. The old style Pandit would not look at Vernaculars at all and the modern educated Indian thinks no Vernacular equal to English. The result has been that at the present time all important work on modern lines has been done in English.

[1] As in my own case, for I was first taught Vedic Philology at College by his eldest son, the late Prof. Shridhar Bhandarkar.

[2] They are widely used in other parts of India and even in Germany.

But quite apart from any "nationalist" bias we want our Vernaculars to be developed and studied scientifically.[1] In this movement the Calcutta University, under the far-seeing guidance of Sir Asutosh Mookerjee, takes the lead. Vernaculars have been long studied both in Bombay and in Madras, but Calcutta has striven to systematise this study and to give new life to it.[2] The study has to be properly organised. Up till now, except Bhandarkar and a few other special workers, Indians have not interested themselves in this study as such. It was reserved for European scholars[3] to study our vernaculars and to point out their mutual relations. With all due honour and respect to these workers one must admit that a trained Indian has far greater chances of success, because he certainly understands his own language better than a foreigner. And as the prejudice against the vernaculars wears out we hope to reach a sane and scientific point of view regarding them.[4] For each important provincial vernacular there should be a band of workers, who should each take up a limited area and thoroughly investigate it. The Linguistic Survey of India made by Grierson should be a working basis but we should try to avoid its short comings.[5] Then again

[1] Rabindranath Tagore has done a great deal of suggestive work for Bengali and his book शब्दतत्व is a serious work on philology, though written by a great poet and though it is in some respects "popular".

[2] This book is the outcome of lectures delivered in 1920 before the first batch of students who took up Vernacular as a subject for the M.A. degree.

[3] Beames, Hoernle and Grierson are the chief names in this branch. Their work is very valuable though it needs revision.

[4] I might add, that the other extreme view, of trying to place the *pure* Vernacular in place of English everywhere (which is doubtless the linguistic aspect of the national movement), has also to die out.

[5] The most noticeable defect is that Grierson's agents who had to do the work of collecting specimens were not properly trained for the purpose and hence the results have suffered considerably. And I do

we have necessarily to pass through a period of collecting material—a dreary but indispensable task. The tendency of jumping to conclusions from half-formed hypothesis should be avoided. We must have an organisation for each linguistic province and a representative central body to work out the plan in outline and to control the whole. Like everything else in India, our linguistic work has to pass through its evolution much more rapidly than in other lands, and the cry is ever for workers and more workers. We need not here consider the use to which these materials would be put by future scholars, but we might think of a series of grammars, dictionaries and illustrative texts for each language.[1] In this task the Poona and Calcutta people might take the lead with Madras to help them on the Dravidian side.

### (*b*) *Study of anthropological and kindred data.*

The Junggrammatiker in Europe laid great stress on the study of psychology as a basis for the study of language and their Indian disciples, of course, follow them here. Hence, in all our work we must keep in close touch with the work of anthropology.[2] For only thus would his work be of some value. Language divorced from the human being who speaks it is nothing, but considered as a characteristic of the human being it is of the deepest interest. The time has indeed come to emphasise more and more

think that the choice of the parable of the prodigal son, to supply a common basis for comparison, has been unfortunate. The subject matter, as well as the spirit of the tale is not suitable to a country which is not dominantly Christian.

[1] The admirable series published by Karl Winter of Heidelberg may be taken as a model.

[2] Here also a great deal of interest seems to have been aroused among Indian scholars.

the *human* aspect of language rather than merely the *formal* aspect, as has been hitherto done.

### (*c*) *Study of the "classical" languages.*

The study of the living languages of India has to be supplemented by an intensive study of Sanskrit, of Pali and of the Prakrits. They form as it were the bed-rock of all our languages. Even the Dravidian languages have been so deeply influenced by Sanskrit that for these too it is necessary to study it well. Then again the "classics" of the non-Hindu peoples of India—such as Avesta, Arabic and Persian, will have to be studied. The first is a great help in understanding Sanskrit; and Arabic and Persian which represent the Moslem culture of India are of great value to every Indian. Both these latter are living languages yet, and as such they are all the more valuable. Persian, moreover, has profoundly influenced every language in India by its political domination extending over nearly eight centuries.[1]

### (*d*) *Study of comparative religion.*

India presents in miniature every problem which agitates the modern world. And naturally for a student of comparative religion and folk-lore no better field can be found than India. Religion touches the deepest chords of our being; and an understanding of the religion of a people is necessary for our work also. Sanskrit, Avesta and Arabic divorced from the religions they embody would be of little worth indeed.

[1] Persian was the "language of diplomacy" all over Asia up to the 19th century.

### (e) *Study of foreign influences.*

We merely enumerate here but few of the directions in which our future work should lie. And before closing we might say a few words about the foreign influences in India. There have always been from the earliest times outside influences in India, but they worked chiefly at the fringes, along the border districts, especially along the north-west and the north-east frontiers. With the advent of Islam we have the influence penetrating to the heart of the people in the north. The south was more or less outside this influence except during the last three centuries just preceding the British rule. Islam, however, was indianised, and it never spread so widely in the south as it had done in the north. This influence has meant a great deal, and some future scholar might work it out in detail. And to-day we see the influence of England and the West. This has penetrated us through and through. It has completely revolutionised all our ideas and has been the most powerful stimulus in our rejuvenation. There is a Divinity that has shaped this end for our land; and many of us believe that this end is to be the re-establishing of our land in the position she held in the remote past, a position which her culture and her achievements have given her a right to assume.

# CHAPTER III

## Language Types and the Classification of Languages[1]

### § 39. *Classification of languages is twofold*

When we look at the multiplicity of languages in the world we naturally desire to arrange them in some kind of classified and systematic manner. But like everything else in nature no sharp lines of division can be found separating languages into various types. Languages merge insensibly into one another; and though two adjacent languages may be quite distinguishable, still there is always a debatable area at the boundary line where the language partakes of the characters of both. In short, "luminous differentiations however desirable from an ideal point of view, can hardly be made in all cases without outraging scientific truth",[2] and a perfect classification, in this imperfect world, can exist only on paper without any warrant of facts. Such classifications as can be made, however, may be of various types according to the principle of division we adopt; and we find that scholors have mainly used a twofold system which may be called (*a*) *Syntactical* and (*b*) *Genealogical*.

[1] I have made use of Chapters IV—X of Tucker's *Introduction to the Natural History of Language* all through this chapter and consequently I have not indicated every reference in the footnotes. Of course I have had to differ occasionally from his opinions as students of his book will clearly see.

[2] Tucker, op. cit., p. 74.

### (*a*) *Syntactical* (*or morphological*) *classification.*

The sentence is the unit of language, and the most marked difference which can exist among languages is that of sentence construction and the various devices each has evolved to show the mutual relations of words in a sentence. Hence *syntactical*[1] differences would give a really good criterion for distinguishing language types. And on the whole it is the most reliable method of classification.

### (*b*) *Genealogical* (*or historical*) *classification.*

Then again we notice that languages are related to each other both in the *material* they possess (words, etc.), as well as in the *method* by which they express themselves (syntax). The obvious conclusion seems to be that the languages of one group are all traceable to a common ancestor,[2] and that such has varied according to the environment in which it found itself. Thus the obvious similarity of what are known as the Aryan vernaculars of India points to such a common ancestry. Similarly English, German, Dutch and Danish are traceable to another such common ancestor and so also French, Italian

[1] I purposely use the epithet *syntactical* to emphasise the fact that it is the *sentence* which is the foundation of a language. The older name *morphological* lays more stress upon the *forms* by which syntactical differences are expressed.

[2] It would be a mistake to assume that this "ancestor" could be *one homogeneous* dialect. It would be much more accurate to state that the members of a group are descendants of a nearly similar group in the past, but that the differences between the various members comprising it were much smaller than they are now. In other words we may say that what form a related group of *languages* now, were at one period a much more closely united group of *dialects*.

and Spanish to a third common ancestor. Going one step further back, we can trace each of these three ancestors to a type which was in its turn the ancestor of all the three. This process is clearly expressed by the name *genealogical*.[1] Some philologists have entirely discarded this method of classification as not being clear enough, but for historical grammar its usefulness is obvious. It must be noted that beyond a certain stage we cannot, in the present stage of our knowledge, trace the next remote common ancestor, and so at last we reach the final hypothetical type. Thus taking our Indian vernaculars we trace them to a common ancestor which we may call *Primitive Indian*[2] and comparing it with the other two common ancestors mentioned above, *Germanic* and *Latin*, we arrive at the next stage—the *Indo-European Ursprache*.[3] But beyond that we cannot go at present, because the hypothetical restoration of this Ursprache shows such a characteristically special type that it shows no traces of a common ancestry with another type arrived at similarly from other languages. We may only speculate as to how such a type arose but we cannot find any historical or documentary proof of the matter. The most satisfactory method, and the most practical as well, is to have the syntactical classification for the various types and then to follow out the branches more or less genealogically.[4]

[1] A word of warning is here needed against carrying too far the analogy of the family tree.

[2] Note, please, *not* Sanskrit: in German *Alt-indisch*.

[3] *Ursprache* means the "original language" or what may be termed the "parent tongue".

[4] A certain amount of syntactical classification runs through genealogical classification also.

### § 40. *Race and Language.*

A word may be said here about the racial classification of languages once very much in favour with philologists. It was based upon a misconception of the fundamental principles of anthropology. To this early misconception is due the very confusing system of nomenclature adopted in some of our books. The same names are applied alike to languages and races, leading naturally to the idea that race and language are identical. There could be no greater mistake. Language is certainly the strongest bond of union among people, and peoples of various races brought together by social or political organisations would in the course of time develop a common national speech. But it is not at all necessary that the racial type should become homogeneous as well.[1] The United States of America is peopled by practically every race of the globe but it has one uniform language. No race has got a special type of language which it can claim as of right. "Community of language necessarily implies close and continued social relations at some period or other. It need not imply more".[2]

### § 41. *Divisions of Languages.*

Coming back to the syntactical classification of languages we notice in the first place a twofold division of languages possible. This is the division into *Inorganic* and *Organic*.

#### (*A*) *Inorganic, Positional or Isolating languages.*

In the former class we have the sentence expressed solely by position of the words *without any internal or*

[1] At any rate it does not do so over appreciably long periods.

[2] Tucker, op. cit., p. 237.

*external modification in the word itself.* Such type is also called Isolating or Positional. The best example of these languages is the Chinese.[1] Here a word is "a noun", "a verb", "an adverb", or "an adjective" according to the position it occupies in the sentence. Such languages have no formal grammar.

### (*B*) *Organic languages.*

Organic languages are those in which the syntactical relations are indicated *by internal modifications in the word itself or by external prefixes or suffixes added to the word.* To this group belong the largest majority of the languages of the world.[2]

### § 42. *Subdivisions of the Organic type.*

Organic languages may be further subdivided into various types according to the various syntactical devices used. The first subdivision would be into: ($\alpha$) Incorporating, ($\beta$) Agglutinating and ($\gamma$) Inflecting.[3]

### § 43. ($\alpha$) *Incorporating languages (also called Polysynthetic or Holophrastic).*

#### (*i*) *Completely Incorporating languages.*

By an incorporating language we mean "an interweaving or amalgamation of merely the most significant sounds of those different sense elements which would in most other

[1] For details of the characteristics of this type see Appendix A.

[2] Of course the division line between even these two great groups is not so sharp as we may be led to expect by these definitions.

[3] I prefer that the word "inflecting" should be used in a restricted sense as here. Tucker uses the name "inflected" to indicate all the three divisions of organic languages mentioned above.

languages stand as separate words ".[1] An example would make this clear. In Greenlandish we get the example *aulisariartorasuarpok*, " he hastens to go fishing ". This " sentence-word " is made up of the parts **aulisar** (to fish), *pe***artor** (to be engaged in) and *pinne***suarpok** (he hastens). Thus we see that the main characteristics of the incorporating languages are, (*a*) the " sentence-word "[2] and (*b*) the dropping of one or more syllables of each component when incorporated. It often happens that the individual components have merely got a hypothetical existence, and are never actually used alone as individual words in the language,[3] except in some of the more advanced types. This type of languages is mainly confined to the two Americas. The name *holophrastic* is also given to this type because the whole situation is expressed literally in one word.

### (*ii*) *Partially incorporating languages.*

The typical Polysynthetic languages incorporate everything (the subject, the verb, the object and all the adjuncts) into one word. But there are some languages that have developed independent words and have the sentence-construction according to other methods, but, at the same time, they also incorporate, though in certain cases only, namely, mainly the pronominal elements. Thus in the Basque [4] we have the pronoun incorporation both for the subject as well as the object. In that language " the verb proper has no existence apart from its pronominal

[1] Tucker, op. cit., p. 78.

[2] We might as well say the " word-sentence."

[3] This has an important bearing on the structure of the language and the development of syntax, see below Chap. VII.

[4] In other respects Basque is agglutinating.

complements".[1] Thus we have *da***kar***kiot* (I carry it to him), *na***kar***su* (thou carriest me), *ha***kar***t* (I carry thee), etc. Hence the Basque verb is a complex thing to conjugate in all its varied forms. Partial incorporation is used as a special device in other languages which are more or less purely agglutinating or inflectional.[2] Thus in the Ba-ntu family we have the pronominal *object* incorporated with the verb as a regular feature: **sim***tanda* (we love it) but *si***ba***tanda* (we love them). In the fully developed inflected languages, especially in the synthetic stage, we often get what may be called "incorporated phrases." Thus in "vulgar" English *ain't* (is not), or the Gujarati phrase મકુંજે (=મેં કહ્યું જે, I said that...),[3] or the Bengali তানলে (=তাহা না হলে, that not being so). Such phrases have a greater chance of developing in those dialects which show what is called a "sentence-accent". Among the European languages *colloquial* French[4] shows this sort of incorporation fairly clearly. Thus the phrase *n'est-ce pas* (is it not?) is often abbreviated to mere *'spas*, and is a typical example from French of "an incorporated phrase".[5]

## § 44. (β) *Agglutinating languages.*

The agglutinating type is the most widely spread through the world, and embraces every variety from the almost pure agglutinating to that practically indistinguishable

[1] Tucker, op. cit., p. 79.

[2] Like the Persian possessive and objective pronouns: *kitāb-***am** (any book), *kitāb-***ash** (his book); also *dīdam-***at** (I saw thee). In the older language the *subject* pronoun is similarly incorporated, e.g., *gerift-***ash** *yakī sang* (he took a stone). See Platts and Ranking, *A Persian Grammar*, pp. 50 ff.

[3] Used colloquially chiefly by the Parsis.

[4] The *written* language shows this only partially and in a few cases only.

[5] Cf. the colloquial English *ain't it.*

from the inflected type of languages. The principle of agglutination implies that the elements of the word are *glued on*, or joined on, one after the other. But there are two important points wherein typical agglutination differs from incorporation. In the first place, each element is felt to be a separate word and is capable of being used as such, and secondly, all the elements of a sentence are not joined on to make a single "sentence-word". The first point is the characteristic feature of agglutination, from which the name itself is derived. This principle gives a great deal of flexibility and power to a language. It is seen extremely well in Turkish. Max Müller has the following glowing description of that language: [1] "It is a real pleasure to read a Turkish grammar... The ingenious manner in which the numerous grammatical forms are brought out, the regularity which pervades the system of declension and conjugation, the transparency and intelligibility of the whole structure, must strike all who have a sense for that wonderful power of the human mind which is displayed in language... In most languages (of other types) nothing of this early process remains visible. They stand before us like solid rocks, and the microscope of the philologist alone can reveal the remains of organic life with which they are built up. In the grammar of the Turkic languages, on the contrary, we have before us a language of perfectly transparent structure, and a grammar the inner workings of which we can study, as if watching the building of cells in a crystal beehive. An eminent orientalist remarked, 'we might imagine Turkish to be the result of the deliberations of some eminent society of learned men.' But no such society would have devised what the mind of man produced, left to itself in the

[1] *The Science of Language*, Vol. I, pp. 421-22.

steppes of Tartary, and guided only by its innate laws, or by an instinctive power as wonderful as any within the realm of nature". An example will make clear that this is by no means an exaggeration, and that the principle of agglutination gives a wonderful flexibility and regularity to a language without unnecessarily overburdening the grammar. Thus, take the infinitive form *sev-mek* (to love), the negative is *sev-me-mek* (not to love). The addition of *in* gives us the reflexive form, *sev-in-mek* means "to rejoice" (lit. to love oneself), and *il* makes the passive, *sev-il-mek* (to be loved). Then again *ish* makes it reciprocal, *sev-ish-mek* (to love one another), and *dir* gives it the causal seuse, *sev-dir-mek* (to cause one to love). But we can go further beyond these simple forms, we can pile up the formative elements and can thus express every shade of meaning we can think of. Thus, *sev-dir-il-mek* (to be brought to love), *sev-in-dir-il-mek* (to be made to rejoice), *sev-ish-dir-il-mek* (to be brought to love one another), *sev-ish-dir-il-me-mek* (not to be brought to ove one ano'her), and so on.[1] This regularity extends all over the grammar, to the nominal declension, to the pronouns and to all the other parts of speech. In the typical agglutinating language each individual element should be felt to be a separate word and should (theoretically at least) be capable of being used as such. This is very fully illustrated in the artificial international language Esperanto. Thus *kat* is "cat", *in* is "female", *id* is "offspring", *et* is "small" and *o* is the sign of a substantive. From these elements we can have varied combinations: *ka-tin-o* (a cat, not a "tom"), *ka-tid-o* (a kitten),

[1] Op. cit., pp. 426-28, where the whole set of 24 such forms are explained. If in the last form we put *eme* instead of *me* it would denote "impossible to be brought to love one another" (ibid, p. 428).

*kat-id-et-o* (a small kitten), *kat-in-et-id-o* (the kitten of a small female cat), and so on. This principle is seen occasionally in the inflected languages also, e.g. in the later Sanskrit forms of the future, भवितास्मि, भवितास्वः, भवितास्मः, etc.

### § 45. *Subdivisions of the Agglutinating type.*

Agglutinating languages can be further subdivided according to the method of agglutination. In all cases the principal element of the word is preserved *full* and unchanged, and the modifying elements may come either in the beginning, or at the end, or in both positions. Thus we get three types, (i) *the prefix-agglutinating*, (ii) *the suffix-agglutinating* and (iii) *the prefix-suffix-agglutinating*. To complete the classification we must add a miscellaneous class under the designation (iv) *partially agglutinating*.

#### (*i*) *Prefix-agglutinating.*

The *prefix-agglutinating* languages dominate Africa south of the equator. They form a closely allied and well-defined group known as the *Ba-ntu* family. The structure is distinguished by *prefixes* in place of what we call "terminations" (प्रत्यय). These prefixes are governed by elaborate laws of concord which give to them a remarkable alliterative effect. Thus the sentence, "our man appears handsome, we love him," is, in Kafir :

**umu***ntu* **we***tu* **omu***chle* **uy***abonakalq* **sim***tanda*,
man our(s) handsome appears, we-him-love.

In the plural this becomes,

**aba***ntu* **be***tu* **aba***chle* **ba***yabonakala*, *si***ba***tanda*.[1]

[1] Tucker, op. cit., p. 140. The sound concord noticeable here is also seen in the inflected type but there the *ending* is similar sounding, see, for example, *Raghuvaṁśa*, I. 5-9.

The alliterative concord which follows from this type of agglutination forms a characteristic feature of the Ba-ntu family.

*(ii) Suffix-aggluti nating.*

In the suffix-agglutinating type we have the suffixes piled up one over another, as we saw above in the examples from Turkish. Languages of this type are among the most widely spread in the world. There are two chief families of this type the *Ural-Altaic* and the *Dravidian.*[1] The latter group is of great importance for India for these languages have profoundly influenced the Indo-Aryan languages of India and have been in turn influenced by them. These languages seem to have advanced to a stage where, in many instances, the suffix seems to have lost all trace of having been originally an independent word. But the agglutinating character, i.e. piling several suffixes together is very clearly marked. Thus, in the inflecting languages in the declension of nouns the number and case are united in one suffix, but in the suffix-agglutinating languages there is a separate suffix for the plural and another for each case. This difference is clearly seen in comparing the plural declension in Sanskrit and Kanarese.

| | *Sanskrit.* | *Kanarese.*[2] |
|---|---|---|
| Nom. | सेवकाः | *sevaka-ru* |
| Acc. | सेवकान् | *sevaka-rannu* |
| Ins. | सेवकैः | *sevaka-rinda* |
| Dat. | सेवकेभ्यः | *sevaka-rige* |
| Abl. | सेवकेभ्यः | (wanting) |
| Gen. | सेवकानाम् | *sevaka-ra* |
| Loc. | सेवकेषु | *sevaka-ralli* |

[1] Some philologists have tried to find a connection between these two families. The resemblances are indeed striking, but it would be fair to state here that their relationship is not yet proved.

[2] See Spencer, *Kanarese Grammar*, p. 20.

Here the *r* running all through the Kanarese forms is the sign of the plural. If we put *n* throughout in place of the *r* we get the singular forms.

### (*iii*) *Prefix-suffix-agglutinating.*

The Prefix-suffix-agglutinating type is fairly widely spread and includes the various families of languages of the Pacific Islands and extends across the Indian Ocean as far west as Madagascar. There are two distinct families to be distingui-hed in this type. Of these the *Malayan* family shows suffixes, infixes and prefixes freely attached. The last however predominate. The other family, *Melanesian* is characterised by suffixing possessive pronouns. The chief characteristic of this type, as noted by F. Müller, is that "the element which corresponds to the roots of other languages appears regularly as a dissyllable, and where it occurs as monosyllable, we are justified in believing it to have arisen from a dissyllable by phonetic loss".[1] The parts of speech are not determined by the form of the word itself, but more by position.[2]

The syntax of these languages is also interesting, the most notable device being reduplication.[3]

### (*iv*) *Partially agglutinating.*

This type contains a lot of miscellaneous languages of which the exact relationships are not quite clear. Of these the *Pŏlynesian* languages are remarkable in having been originally agglutinating and closely allied to the

[1] Quoted by Tucker, op. cit., p. 143.

[2] A peculiarity shared by Chinese. Also in English we find words like *profit, love, walk, drink, good*, which may belong to one or the other "parts of speech" according to the context. This marks an advance to the analytic stage.

[3] See below, Chapter VII.

Malay family,[1] in which the agglutination was broken up by contact with other races speaking a different type of languages. Some of these border on the inflecting, some on the isolating and some on the incorporating types.[2]

### § 46. (γ) *Inflecting languages.*

The third main type, known under the general name of *Inflecting Languages*, is distinguished from the other main types in the very important respect that in these the relations of words to each other in the sentence are indicated by the addition of syllables or letters (mostly as suffixes) and these affixes show no traceable signs of having been independent words even when traced back as far as they can go.[3] The suffix is an essential and integral part of the word and is, as it were, amalgamated with the word.[4] This type includes a twofold division. In the one the flexion, i.e. the grammatical element, is mainly *internal*, in the other it is mainly *external*. These may be called *dynamically varying* and *dynamically unvarying* respectively. There is, however, no relationship

[1] As a matter of fact, philologists have grouped these two together and called this group the *Malayp-olynesian*. Tucker says (op. cit., p. 141) that these languages, "if taken alone would never be classed as agglutinative, in as much as they express grammatical relations by means of free particles after the manner of the most advanced analytical tongues, such as English".

[2] *Japanese* and the *Caucasian* family are examples of the first kind, *Hausa* of the second and *Basque* of the third.

[3] The history of suffixes like the English *-ly* (from *like*) leads us to suppose that other suffixes have had a similar history, but there is no such historical proof available for the vast majority of these.

[4] Hence the name *amalgamating-inflectional* (as distinguished from *agglutinating-inflectional*) used by Tucker.

necessarily implied between these two : they have been placed together merely for convenience of classification.[1]

(*i*) *Dynamically varying, i.e., possessing internal flexion.*

In this type there are a certain number of suffixes and prefixes, but in addition, and in fact principally, the syntactical relations are indicated by a variation of the vowels within the body of the word itself. The "root" in these languages consists of three consonants and these form the constant element in all derivative forms. The vowels needed to make the word pronounceable at all indicate the grammatical relationship. "The purely lexical element .....lies in the consonants, the grammatical in the vowels".[2] For instance from the root **qtl** we get **q***a***t***a***l***a*** (he killed), **q***u***t***i***l***a*** (he was killed) **y***a***qt***u***l***u*** (he kills), **q***ā***t***i***l** (killing), **q***i***tl** (enemy), **q***i***t-***a***l** (a blow), etc. The great family of *Semitic* languages belongs to this type, and the very nature of this type makes it a fairly stable one and the languages show a uniformity and closeness of resemblance much greater than is found in any other family. The other great family of languages *Hamitic*[3] is also included in this type, although it shows but faint traces of this special characteristic. Like the Polynesian group the Hamitic has lost its special structure[3] owing

[1] An attempt was made by the earlier generation of philologists to trace a connection between the Semitic and Indo-European families, but it had not been very successful. Recently, however, a very remarkable book on the subject has appeared, *Die Entstehung des semitischen Sprachtypus* by Dr. Harry Torczyner (Vol. I, 1916).

[2] Misteli, quoted by Tucker, op. cit., p. 161.

[3] But it bears great resemblance to Semitic in three particulars : (1) the pronouns, (2) the plural suffixes and (3) the affix *-t* for the feminine. These can hardly be accounted for unless we assume a common origin. See Tucker, op. cit., pp 159-160 ;[see also Appendix A.

to foreign influences. But this family must have separated from the original Semitic many thousands of years ago.[1]

The Semitic languages in course of their long history show a distinct development from the original synthetic to the analytic type. In other words, instead of depending solely on the inflection the tendency is to drop them, and the languages (like modern Hebrew) depend more and more upon the position of the words in the sentence.

(*ii*) *Dynamically invariable, i.e. with external flexion.*

Inflecting languages of the second type are those in which the flexion is external and entirely of the suffix-variety.[2] In this type we do not get the trilateral roots and the internal variation of vowels, as in the Semitic. To this group belongs the Indo-European family of languages. To this family belong many of the best-developed and the most cultured languages of the world. Like the Semitic group they show an earlier synthetic stage, which later on is replaced by the analytic.

As this is the most important family for the purposes of philology[3] it would be well to enumerate here some of its most important characteristics.

§ 47. *Main characteristics of Indo-European languages.*

(*i*) *Suffix-inflection.*

The inflection is in all cases terminational, i.e. with the help of suffixes. As far back as we can trace these suffixes

[1] The ancient Egyptian was a Hamitic tongue; but even the earliest records of Egypt show no signs of the typical Semitic structure. Tucker, loc. cit., also pp. 172-173.

[2] There are prefixes but they are only modificatory of *meaning* and do not affect the syntactical relationship between the words. See below § 47 (iv).

[3] The languages of this family have been worked out in greater detail and have been studied during a longer period than those of any other family.

we fail to discover in the vast majority of cases any independent meaning. But from a few examples[1] we may, by induction, conclude that they might have existed at one time as independent words, which were originally agglutinated, and owing to their being broken up through phonetic and other causes these modifying elements became mere syllables without any meaning and were occasionally reduced to a single letter only.[2] But though inductively the argument is sound enough, we cannot give any definite historical proof that the inflections of the Indo-European languages were originally independent words.

### (*ii*) *Originally synthetic in structure but getting more and more analytic in course of development.*

In the I.-E. family the suffix is definitely an integral part of the word and forms with the "root" a grammatical unit. Hence, the root being necessarily the most important part, the kernel, as it were, of the word, the suffix suffers the most in the course of the variations which must naturally come about in every language. We, therefore, soon reach the stage when phonetic and other changes have corrupted the forms to such an extent that the suffixes get confused and are even entirely lost. And in their place we get prepositions, auxiliary verbs, adverbs and other adjuncts. The languages thus progress from the synthetic and purely inflectional to the analytic and positional type. The history of most of our Indian Vernaculars has been, in the main, along this line.[3] The

[1] Such as English *-ly*, or the Bengali -জন্য and -হইতে.

[2] For instance the স্ in the *s*-aorist, the ন্ inserted in the 7th (রুধ্)-class of Sanskrit verbs.

[3] Notably is this the case with Modern Bengali which is clearly analytic. The other Vernaculars have had a varied history and have not

development of Modern Persian is another excellent example of this progress towards the analytic.[1] English also shows a similar history.[2]

### (*iii*) *Monosyllabic roots with the addition of primary and secondary suffixes.*

The "roots" in I.-E. are monosyllabic. But they are not to be thought of as having an existence apart from the suffixes. The variety of the latter is large enough in the older languages, to serve the most varied needs of human thought. And we find that we can have suffixes piled up one after the other.[3] This is probably another reason for inferring that these forms were originally of the agglutinating type. The suffixes may be further subdivided into primary (कृत्) and secondary. The latter are of several types such as word-building suffixes (तद्धित), case-indicating suffixes (सुप्-प्रत्यय-s) and verbal suffixes (तिङ्-प्रत्यय-s).[4]

### (*iv*) *Syntactical prefixes unknown.*

Prefixes for syntactical purposes are quite unknown. The prefixed forms are really in origin of the nature of

advanced far enough to be so completely analytic. Among the retarding influences may be mentioned that of the Pāṇinian Grammar, for on this as model all our Vernacular Grammars have been based. For further details see Chapter XII.

[1] It has been rightly said that the whole of the formal grammar of Modern Persian may be written down on a sheet of note paper. See the "Epitome of the Accident" of Persian given at the beginning of W. St. Chair-Tisdall's *Modern Persian Conversation Grammar*.

[2] See further Chap. VII.

[3] e.g. जोषयिष्यध्वम् (*Mahābhārata*) which is root + causal sign + future sign + second person plural suffix. Forms like कर्तृभिः show also root + primary suffix + case suffix. Compare this with the Turkish type of agglutination given above.

[4] See below Chap. VIII.

compounds. The *upasargas* in Sanskrit (as also the corresponding verbal prefixes in Greek, Latin and Germanic) modify the *meaning* of the verb, but have no special syntactical signification. It could be separated in the Vedic (as in Greek) from the verb and even (as in the case of the augment अ)[1] be omitted.

### (v) *The power of making tense compounds.*

The most notable characteristic of the I.-E. family is the power of making compounds. This is not mere juxtaposition (as with the Semitic type of compound),[2] but the words joined together have clearly-marked syntactical connections. In true compounds all syntactical suffixes are omitted.[3] The meaning of the whole compound is not merely equal to the sum of the meanings of the words making up the compound,[4] but the meaning is a resultant, so to say, of the syntactical relations between the words as implied by the suffixes which have been omitted. In fact we may regard the compounds of the I.-E. (notably the huge ones found in "classical" Sanskrit and in Welsh[5]) as bits of the sentence expressed in the isolating manner.

[1] Giving the so-called "improper subjunctive" (Whitney, *Sanskrit Grammar*, § 563). Note that in this case the prefix is *omitted* for syntactical reasons.

[2] See Tucker, op. cit., p. 163, ftn. 1.

[3] The exceptions are the compounds of the अलुक्-type, which are the earliest type of compound.

[4] As with the द्वन्द्व. In Hebrew compounds the relationship implied between the components is that of "object" or of "possession"; both, it may be noted, are relations of the simplest type. See also Chapter VIII.

[5] The famous name of a Welsh village in the Isle of Anglesea is *Llanfairpollgwyngyllgogerychwyrndrobwll-llantisiliogogogoch*, and it

### (*vi*) *Vowel-gradation.*

Another characteristic and well-marked feature of the I.-E. languages is the phenomenon known as *Vowel-gradation.* This originally was the result of the accent system of the I.-E.,[1] but with the dropping out of the suffixes very often the vowel-change has been the only sign left by the flection, as in the English strong verbs, *drink*, *drank*, *drunk*, etc. In the Semitic the vowel-variation is *syntactical* and hence has persisted practically unchanged all through the history of these languages. In the I.-E. this has not any special syntactical signification but is rather the result of phonetic changes produced by the accent.

### (*vii*) *Flexions in great variety.*

The whole of the syntactical relations being entirely indicated by flexions in the I.-E. and there being a separate flexion of each individual relationship, naturally a very large variety of these developed in this family of languages. Hence when the various languages had branched off, each developed along its own special line taking up from the original store of flexions only those which it needed. Thus we see at even the earliest stages of the various branches, that all the suffixes are not common between these separate branches. The breaking down of older flexions was often followed by introduction of new ones in many cases and these new ones could hardly be expected to be common between any two languages. To this reason is chiefly due the exceedingly rich variety of suffixes when we consider the I.-E. languages as a whole.

means "The church of St. Mary in a hollow of white hazel, near to the rapid whirlpool, and to St. Tisilio church, near to a red cave." The post office regards the first twenty letters to be enough on an envelope! See also below Appendix B.

[1] See Chapter X.

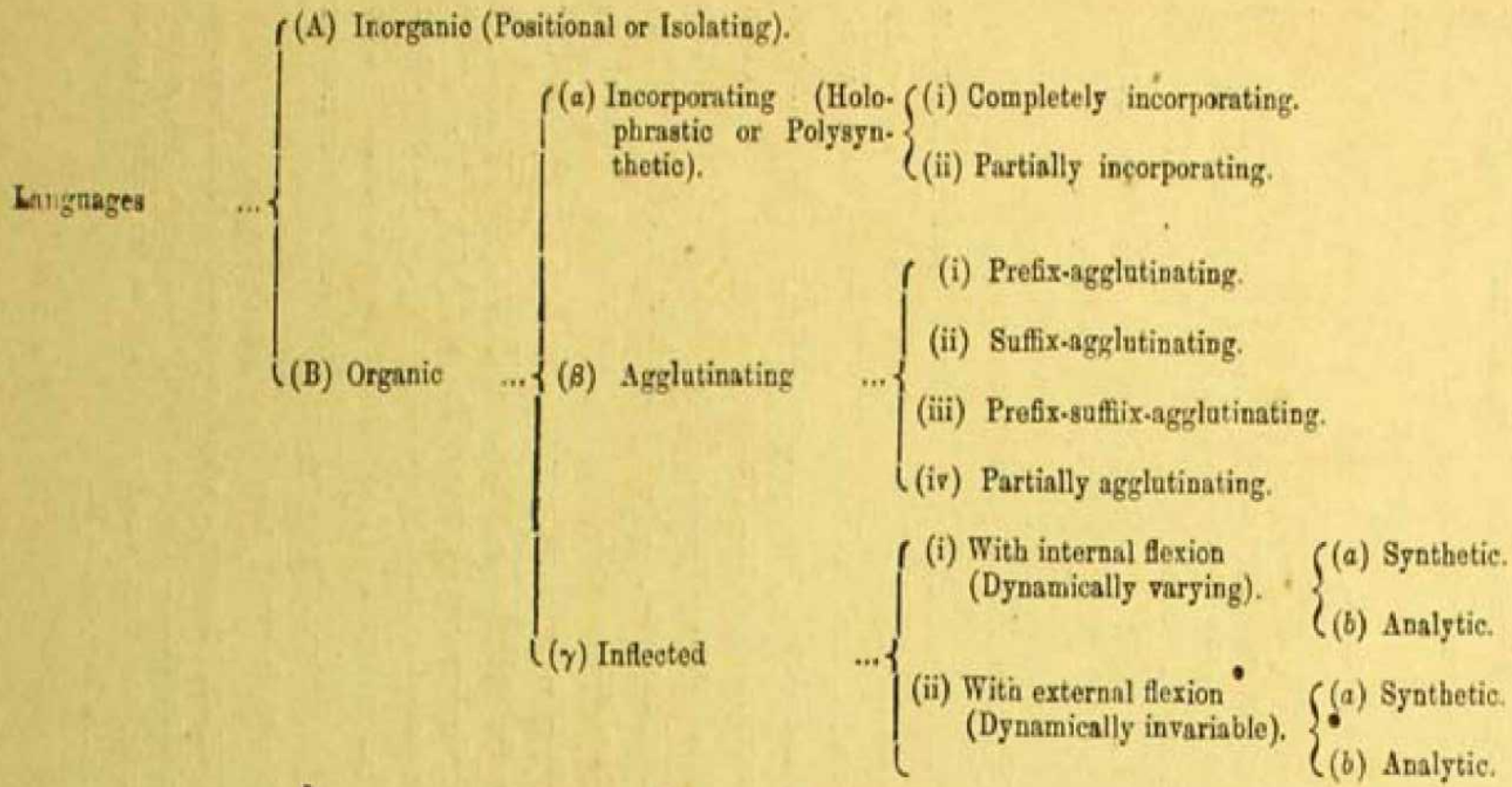



TABLE OF THE PRINCIPAL LANGUAGE-TYPES.

# APPENDIX A

## The Various Language Families of the World.[1]

### § 1. *Influence of geographical position and environment on language development.*[2]

We have looked at the various types of language according to their syntactical relations and now we might examine the various families of languages in some detail. Here we may use the "genealogical" classification for each family, but we must be cautious not to apply genealogical relationships too literally to languages. It is necessary also in connection with these "genealogical" relationships to remember also the geographical relationships of the various types. The geographical position of a language has very often had a great deal of positive influence upon its development. The influence of surrounding languages, for example, on the Polynesian group and on the Hamitic languages has been so profound as to definitely alter their syntactical type.[3] So also have the Aryan languages of India been profoundly influenced by the Dravidian family. It is an exceedingly interesting problem to work out in detail but work along these lines is just beginning. Then again, the social and cultural status of the speakers of a language and of the neighbouring

[1] I have drawn upon Tucker (op. cit., Chaps. VII-IX) very largely for this Appendix.

[2] See also Chap. IV below.

[3] See below §§ 7 and 15.

tribes,[1] and other factors, like climate, food, etc., profoundly influence language. In this place the importance of geographical position is merely mentioned: its bearing upon the language is considered in another place.[2]

## § 2. *The four linguistic "regions" of the World.*

In order to have a clear idea of the geographical distribution of languages it would be best to divide them into various "regions". These regions are (1) the two Americas, (2) the Pacific Ocean, (3) Africa and (4) Eurasia. Each of these contains several families which may or may not have been originally connected. But it is certain that within each region the languages have influenced each other to a very considerable extent.

## § 3. (*I.*) *The American Region. Characteristics.*

The two Americas are entirely distinct from the rest of the world as regards languages. Though there is a great variety among them and several distinct families can be clearly made out, still they all show one common characteristic. They are all of the incorporating variety. The sentence is often one word of formidable size because the subject, object and other verbal adjuncts (such as adverbs of time, manner, etc.) are all incorporated into one long word. And the incorporating is not a mere joining of words as in the compounds of Sanskrit or Greek but the most significant sounds or syllables of each simple word are taken to make the "sentence-word", so that the

[1] Thus P. W. Schmidt in his book *Die Gliederung der australischen Sprachen* tries to connect the social institutions of Australian tribes with the peculiarities of their dialects. He has done the same with South American languages, see his article entitled "Kulturkeise u. Kulturschichten in Südamerika" in *Zeitschrift für Ethnologie*, 1913.

[2] Chaps. IV and VII below.

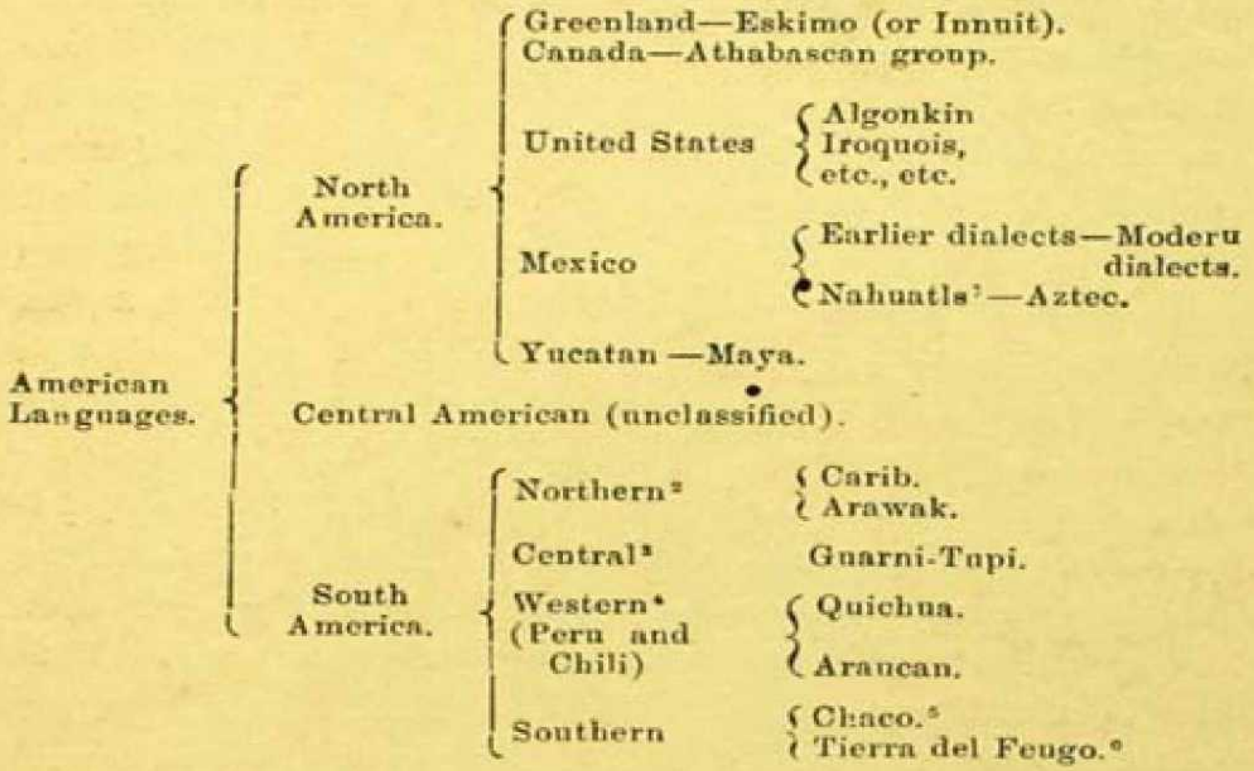
whole " will awaken in the mind at once all the ideas singly expressed by the words from which they are taken ".[1] Thus in Cherokee we get the much quoted example, *nadholinin* (bring us the canoe) from *naten* (bring *amokhol* (canoe) and *nin* (to us). It is as if the Sanskrit sentence पतंगाः प्रदीप्तं ज्वलनं पतन्ति were to become पतंदीप्तज्वलनन्ति Of course we need not think that the whole of a complex sentence can always be thus contained in a word, though there are some " words " which convey a fairly complex idea, for instance, one of eleven syllables which means " he fell down on his knees and besought him ". Incorporation, however, is found in all stages of development among the American languages. In some languages we get even independent words capable of being used as such. Thus in Mexican we get besides the incorporated " word " *nišotšitēmoa* (I seek flowers), the single word *šotši* (flower) which with the suffix *-tl* is capable of independent use. And we may use the anticipatory pronominal element *k* and say *ni-k-tēmoa in šotšitl* (lit. I seek it, the flower), thus combining both types of construction.

### § 4. *Classification of American languages.*

These languages have not yet been quite satisfactorily grouped together. But some of the important dialects may be here mentioned in tabular form thus :[2]

[1] Tucker, op. cit., p. 153. But it must be noted that "single words" as we understand the term in our inflecting languages are very often non-existent in the incorporating varieties of speech. See below Chapter VII.

[2] It may be noted that the classification here is mainly geographical because that is fairly convenient. Naturally it cannot be even mutually exclusive. Thus some of the dialects in United States (like the Apache of Arizona) belong distinctly to the Canadian group. Then again they shade off into each other because the modern political boundaries are not necessarily the linguistic ones.




These languages range from the very primitive speech of Tierradel Feugo up to the polished Maya and Nahuatl (of the old Mexican Empire)[7] which represent considerable refinement and have produced a fair amount of literature.

[1] This was the language of civilised peoples of the pre-Spanish period.

[2] Including the islands of the Caribbean Sea and the Lesser Antilles and the Northern States of South America.

[3] This group extends from Guiana through Central Brazil right up to the La Plata. The Tupi tribes are later emigrants and they form a sort of ring round Brazil, with an offshoot into Ecuador. See map in *The World's History* by Helmholt, Vol. I.

[4] These are also languages of civilised peoples. They have, however, not been classified.

[5] In Patagonia.

[6] These are among the most primitive peoples of the world and their language is also of a most primitive type.

[7] Which ended with Montezuma in the 16th cent. A.D.

§ 5. (*II*) *The Pacific Ocean Region : the chief families.*

The large and small islands of the Pacific show a bewildering variety of languages and dialects. Only a few of these are literary and one, at any rate, the Malayan, possesses literature of an advanced type. All these languages are predominatingly of the agglutinating type, but some have gone far along the lines of analytic structure. On the whole three large and two small families may be distinguished among them. These are : (*α*) the *Malayan*, (*β*) the *Melanesian* and (*γ*) the *Polynesian* ;[1] and (*δ*) the *Papuan* and (*ε*) the *Australian*.

§ 6. *The larger families.* (*α*) *The Malayan Family.*

The Malayan may be subdivided as follows :—

- Malayan group
  - Malaya-Javanese sub-group.
    - Malay (in Malay Peninsula and Sumatra).
    - Javanese or Kawi (spoken by three-fourths of people in Java).
    - Sundean (spoken by the remaining one-fourth in Java).
    - Dayak (in Borneo, except the coasts).[2]
    - Minor dialects of the various islands between Java, Borneo and Celebes.
  - Tagala sub-group
    - Tagala (in Luzon and the Philippines).
    - Formosan (eastern half of Formosa).[3]
    - Malagasi or Hova (spoken in Madagascar).[4]
    - Minor dialects of the islands to the east of the Philippines and of the Nicobar Islands.

[1] The first three are often included together under the name *Malay-Polynesian* family. Some include the other two also under that name ; see below § 7.

[2] Malay is spoken along the coasts of Borneo.

[3] Chinese is spoken in the Western half.

[4] The inclusion of Madagascar is very remarkable indeed, when we remember that more than 3,000 miles of ocean, with but few islands in between, rolls between Sumatra and Madagascar.

### (β) *The Melanesian Family.*

This family contains a large number of dialects of the smaller islands of the Pacific. Of these the Fijian stands nearest to the Malay in structure. This branch extends through the islands running south and east from New Guinea up to New Caledonia and Fiji.

### (γ) *The Polynesian Family.*

This is an important family of languages both because it comprises languages of peoples who have risen considerably in the scale of civilisation and also because the languages present an interesting history of development. The chief branches are: (1) Maori (in New Zealand, (2) Tongan, (3) Samoan and (4) Hawaiian.[1] These languages have been well investigated and form an interesting study especially with reference to the mutual influence of languages.

## § 7. *The mutual relations of the three larger families forming the so-called "Malay-Polynesian Family."*

The mutual relations of these three families forming the so-called *Malay-Polynesian* family of languages are very interesting. These three, fairly well defined geographically as well, "are so distinguished in structure as to represent three steps in morphological development."[2] The Malayan branch is a prefix-suffix-agglutinating type. The preposition for instance is *prefixed* to the noun to form cases. But a remarkable development is the infix.

[1] See Tucker, op. cit., p. 143, ftn. 1, for the mutual relations of these languages.

[2] Tucker, op. cit., p. 141.

The "root" is generally dissyllabic and it is often split to take one or more infixes.[1] Thus in Tagala **sulat** (writing)[2] gives **s-*un*-ulat,** (to write) **s-*u*-*ng*-*m*-ulat** (wrote), and **s-*in*-ulat-*an*** (was written). The Melanesian family has a few prefixes[3] and a number of "demonstrative" (or pronominal) suffixes agglutinated with the verbs; but the other syntactical relations are largely expressed by loose words and particles as in English. In other words the Melanesian seems to have advanced somewhat towards the analytic stage. The Polynesian family consists of languages which are so largely analytical in structure that they can hardly be considered agglutinative. It seems that they were carried over to their present abodes by emigrations from the Malay Peninsula and that they were largely broken down through the influence of the Papuan and other tongues on their way thither. There are forms in Polynesian which might be called agglutinating, but the "root word" and the particle are very loosely connected and the "root" is not modified in any way whatever by this addition. Another very remarkable characteristic noticeable in all the three groups is that reduplication is used to denote all sorts of syntactical relations. Thus, in Malay, *raja-raja* is the plural of *raja* (king). In the Polynesian group this is extremely well seen. Thus, in Maori, *haere* (go) and *haerehaere* (walk up and down), in Hawaiian, *huli* (search) and *hulihuli* (to search through and through), in Raratongan *nui* (great) and *nuinui* (very great). The fact that all these three families are from one original source is no longer doubted. The vocabulary

[1] F. Müller quoted by Tucker, op. cit., p. 143. See also Chap. III. (§ 45, iii) above. Infixes, it may be noted, are only found in Malayan.

[2] This is used as a noun, in Malay *surat* means "letter."

[3] Such as for the causal or the intensive.

too is very closely akin even between distant languages like the Tongan and Malay. And the probability is that Malay represents the earliest type and Polynesian the latest.

### § 8. *The smaller families.* (δ) *The Papuan Family.*

The Papuan is a small group of languages which break up the geographical continuity between the Malay and the Polynesian languages. These languages also are mainly of the agglutinating type. The declension and conjugation are fairly regular in type and prefixes and suffixes are both used. But their nature is such that the method of expression " differs from complete analysis only in the degree of separation of the elements ".[1] Thus, in the Mafor of New Guinea [2] **ja**-*mnaf* (I hear), **wa**-*mnaf* (thou hearest) **i**-*mnaf* (he hears), **si**-*mnaf* (they hear); and when the object is added we get forms like **ja**-*mnaf*-**au** (I hear thee), **si**-*mnaf*-**i** (they hear him), etc.

### (ε) *The Australian Family.*

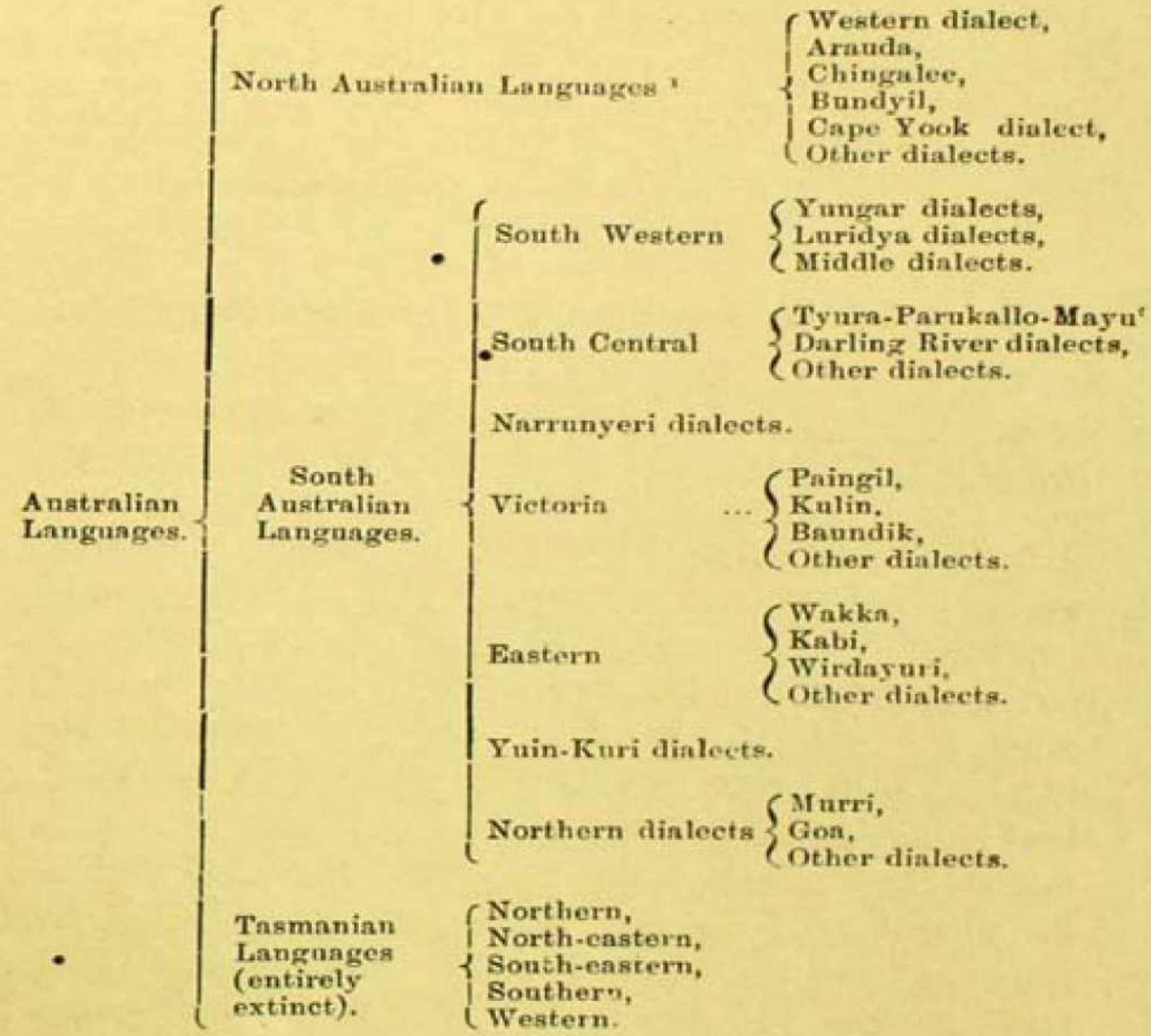
The languages of this family are closely knit together and with the now extinct Tasmanian are derived from a common source. According to some, the ancient Dravidian [3] was this source, but this opinion is not universally accepted. They are mainly of the suffix-agglutinating type with varying degrees of consistency in the application. The main subdivisions are as follows :[4]

[1] Tucker, op. cit., p. 146.

[2] This is the only dialect fairly studied by scholars.

[3] *Ency. Brit.*, s.v. " Australia ".

[4] From P. W. Schmidt's *Die Gliederung der australichen Sprachen.*




## § 9. (*III*) *The African Region.*

The languages of Africa offer us a great variety of idiom and no less than five distinct families of speech.[2] These are (α) the Bushman group,[3] (β) the Ba-ntu family,

[1] Schmidt divides these into three main sub-groups according to special grammatical peculiarities.

[2] The subject is exceedingly well treated by A. Werner in her book on *The Language Families of Africa*.

[3] This division is called "a group", because we do not know enough of the mutual relations of these languages to enable us to arrange them as genetically related; see Werner, op. cit., pp. 15-16.

(γ) the Sudan family, (δ) the Hamitic family and (ε) the Semitic family. The problems presented by the African languages are very varied and interesting and they throw unexpected light on many questions of language growth and of change in language due to foreign influence.

### § 10. (a) *The Bushman Group: chief characteristics.*

The Bushmen are regarded by many as the aborigines of South Africa, and their languages, now rapidly disintegrating, are probably among the most primitive in Africa. Dr. Bleek and his sister-in-law Miss Lloyd collected a great deal of material for the study of these languages.[1] There are a variety of dialects noted but their mutual relations are not understood enough, nor have they been referred to any one special type of speech. They are reported "as tending from the suffix-agglutinating to the isolating method".[2] These languages exhibit on the one land some characteristics in common with the Sudan family, but on the other hand the Zulu has borrowed its phonology from the Bushman. There are several important and very specially marked characteristics of this latter group.

#### (i) *The "clicks".*

They have certain peculiar sounds known as "clicks". These are not in the nature of the "explosives" that we know in other languages, but they are aptly described as "suction sounds".[3] There are no fewer than six such

[1] *Specimens of Bushmen Folk-lore*, by Miss Lloyd, London, (1911).

[2] Tucker, op. cit., p. 148.

[3] Prof. Meinhof, probably the best living authority on African languages, uses this term, *Sauglaute*, "suction-sounds".

to be distinguished, viz. the "dental click" ( ǀ ), the "cerebral click" ( ! ), the "lateral click" ( ǁ ), the "palatal click" ( ǂ ) and the "labial click" (ʘ).[1] These clicks are also found in other languages of Africa as well, e.g. Zulu, where they are probably borrowed. These clicks are a special difficulty for learners of these languages especially for the Europeans.[2]

### (*ii*) *Gender.*

Another remarkable point about these languages is the gender. The so-called distinction of gender is not based on sex at all but it seems that a distinction is drawn primarily between *persons* and *things* or *things with life* and *things without life*.[3]

### (*iii*) *Number.*

The methods of plural forming are extremely varied and apparently very irregular. Bleek mentions from fifty to sixty ways of forming the plural. The most primitive method is however the reduplication of the noun.[4]

## § 11. (β) *The Ba-ntu Family : characteristics.*

The Ba-ntu languages from a very widely extended and a closely knit family[5] occupying the larger part of

[1] The symbols enclosed in brackets are the phonetic transcriptions used for these clicks. For the exact method of pronouncing these see Werner, op. cit., pp. 127-128.

[2] Hence one of the early Missionaries, who wrote about the Bushman languages, says that "they cluck like turkeys", and that "one is inclined to say that they bark rather than speak".

[3] See "the Law of Polarity, § 16 below". This seems also to have been at the root of the gender distinction in Tamil.

[4] As also in Malay and sometimes in Japanese.

[5] "None of these diverge from any other more widely than English from German", Tucker, op. cit., p. 138.

South Africa. They are pre-eminently prefix-agglutinating languages. The so-called "alliterative concord" which is such a marked feature of these tongues follows almost naturally from the prefix-agglutination.[1] Another notable peculiarity is the absence of grammatical gender. There are not even the masculine and feminine pronouns corresponding to "he" and "she".[2]

## § 12. *Divisions of the Ba-ntu Languages.*

The main division of the Ba-ntu are as follows, the classification being chiefly geographical :[3]

- Ba-ntu Family
  - Southern (South of the Zambesi).
    - Zulu
    - Herero (W. Coast of Cape Colony)
    - Xosa (E. Coast of Cape Colony)
    - Other dialects.
  - East Africa
    - Swahili (Zanzibar)
    - Ganda (Uganda)
    - Other dialects.
  - West and Central Africa.
    - Duala (Kamerun)
    - Kongo (South of the Congo)
    - Bemba (Rhodesia)
    - Other dialects.

## § 13. (γ) *The Sudan Group : characteristics.*

This group stretches right across the continent from the West to the East in a comparatively narrow band north of the equator. These languages represent on the

[1] See above, Chap. III (§ 45. i).

[2] Werner, op. cit., p. 22.

[3] After Werner (op. cit., p. 72). Tucker divides longitudinally into Eastern, Central and Western.

whole an isolating or analytic type.[1] Their chief characteristics are :

(i) Absence of inflection, i.e. an isolating structure,
(ii) Monosyllabic roots,
(iii) Absence of grammatical gender,
(iv) Special methods of forming plural,
(v) Small co-ordinate sentences,
and (vi) " Descriptive roots ".

### (*i and ii*) *Isolating structure and monosyllabic roots leading to " tones ".*

The monosyllabic roots and the want of inflection have led to the same devices for multiplying sounds as in Chinese.[2] Thus these languages have adopted several " tones " to indicate differences in meaning.

### (*iii*) *Absence of grammatical gender.*

The want of gender is met by adding words indicating " male " and " female ", but the pronoun of the third person has only one gender.

### (*iv*) *Methods of forming plural.*

The plural is expressed generally by the juxtaposing of either the pronoun " they " or " these " or the word " people ". Plural in individual cases may be expressed, but the conception of plurality, of " more-than-one-ness ", is not clearly understood. In some of the languages of

[1] Tucker regards these languages as representing " agglutination in its rudest shape, viz., the simple juxtaposition of particles " (op. cit., p. 147). Extremes meet indeed ! For where is the difference essentially between these languages and the highly cultural language of China,— except in the people who use them and in the thoughts they embody ?

[2] See below § 23.

Eastern Sudan the plural is expressed by lengthening the vowel: *ror* a forest, plu. *rōr*.[1]

### (*v*) *Small co-ordinate sentences.*

The syntactical relations are expressed in peculiar ways. One important result of the absence of prepositions is that complex ideas are expressed by short sentences made up of a single verb and a noun which are *co-ordinated* together. Thus instead of saying "I am going to the town" the Togo language uses the phrase, "I go, reach town('s) inside"[2]; in Ewe the sentence, "he hit him with a stick" is expressed by "he took stick, hit him", "he jumped from the ship into the sea" would be "he jumped, left ship('s) inside, fell sea('s) inside."[3]

### (*vi*) "*Descriptive roots*" *or* ध्वन्यात्मक *words.*

One important class of words belonging to this group of languages are variously called "sound-pictures" (*Lautbilder*), "word-pictures" (*Wortbilder*), "onomatopoeias" or "descriptive adverbs".[4] "These are invariable words imitating, or at least expressing, not merely sounds and movements,...but form, position and even colour, taste and smell...They are functionally adverbs since

[1] Probably there was a heavier stress on the word to express the notion of plurality. This might have led to the lengthening of the vowel.

[2] Note also that the absence of a preposition like "of" results in the genitive case being placed *before* the "thing possessed" to indicate the relationship of the "possessive".

[3] Werner (op. cit., p. 46) notes that some of the Ba-ntu prepositions are, in their origin, such phrases, *udani*, "within" (Swahili) originally meant stomach. In Zulu *pezulu* "above" is from *pa-izulu*, "on the sky", *pansi*, "below" was *pa-nsi* "on the ground".

[4] "Ewe is extraordinarily rich in them", Werner, op. cit., p. 147.

they qualify the action signified by a verb, but some may be classed as adjectives. But they only apply to one particular action, state or quality, and are, therefore, always used with one special verb or noun and never found in any other connection".[1] Thus, with the verb *zo* to walk, we get in Ewe several dozen phrases like the following:

*zo ka ka*, to walk upright,
*zo dze dze*, an assured energetic gait,
*zo tya tya*, to walk quickly,
*zo si si*, said of small people, lightly stepping along,
*zo boho boho*, the heavy walk of a stout mans,
*zo tyo tyo*, the firm and deliberate gait of a tall person,
*zo kpudu kpudu*, the quick hurried gait of a small man,
*zo wudo wudo*, a quiet graceful way of walking, especially of women,
*zo gowu gowu*, to walk with a slight limp, the head leaning forward,
*zo lumo lumo*, running of small animals, such as rats and mice.[2]

## § 14. *Divisions of the Sudanian group.*

The following table shows the main divisions :—

- Sudanian or Negro languages
  - Senegal languages — Wolof
  - Ewe group
    - Ewe
    - Yaruba
    - Ashanti dialects
    - Other dialects.
  - Central African group — Songhai and others.
  - Upper Nile dialects
    - Lake Tchad dialects
    - Dnika
    - Shilluk
    - Other dialects.

[1] Werner, loc. cit.; the ध्वन्यात्मक words in Bengali are an exact parallel; see Rabindranath Tagore's शब्दतत्व, chap. 1. Such words make up pre-eminently the "idiom" of these languages.

[2] Werner, loc. cit.

## § 15. (δ) *The Hamitic family: characteristics.*

This is a very important group of languages practically spread over the whole of North Africa.[1] Certain of the tribes speaking these languages have also penetrated far into Central and South Africa.[2] These languages are fully inflected and in several respects are very remarkably like those of the Semitic family.[3]

Their chief characteristics are :

(i) various inflectional devices,
(ii) "tenses" not exactly indicative of time,
(iii) grammatical gender,
(iv) great variety of the plural,
(v) the "law of polarity".[4]

### (*i*) *Inflections.*

The inflections are various and of both the suffix and the prefix type. Nouns, however, usually take suffixes, while verbs have both suffixes and prefixes. There are derived conjugations also like the intensive, causal, reflexive,[5] etc. Some derivative forms are reduplicated,

[1] Modern Egyptian is Semitic, but Ancient Egyptian was Hamitic. In Abyssinia also the Hamitic type is more ancient than the Semitic.

[2] The *Masai* in equatorial Africa near the great lakes, and the *Nama* (or Hottentot) in the far south-west are the most remarkable instances.

[3] This has led many to postulate a common ancestral Hamito-Semitic Ursprache. But of course such a type must have been far anterior to any history.

[4] Werner, op. cit., pp. 87-94.

[5] The reflexive would correspond in signification to the *middle voice* of Greek and the आत्मनेपद of Sanskrit.

e.g. the intensive in Somali,[1] *lab*, to fold, *lablab* to fold repeatedly; *goi*, to cut, *gogoi*, to cut to pieces. In some forms there is an internal vowel change e.g., *gal*, to go in, *geli*, to put in.[2]

### (*ii*) "*Tenses*".

The so-called "tenses" do not imply time so much as a division between a completed and an incomplete action, contrasting, as it were, the action and the result of the action.[3] The idea of time comes in later, and the "time-tenses" are made up with auxiliaries.

### (*iii*) *Gender.*

The gender is not based on sex distinctions, but as in the Semitic and Indo-European families it is "grammatical." Perhaps it would be more correct to say that nouns are divided into two classes, which answer more or less to our masculine and feminine genders. *As a general rule* the big and strong things are "masculine" and the weak and small things are "feminine." Thus "sword" is masculine but "knife" is feminine, so also "long coarse grass" is masculine and "short grass" or "turf" is feminine, "a large rock" and "elephant"[4] are masculine

[1] This method of making the intensive is essentially the same in the I.E. languages. Reduplication is certainly the most natural method for the purpose.

[2] Comparable to the I.E. Ablaut and vowel-gradation.

[3] This characteristic of "tenses" is shared with the Semitic family as well. Somewhat similar is the use of the "aorist" (लुङ्) in Vedic Sanskrit as contrasted with the "perfect" (लिट्); see Whitney, *Sanskrit Grammar*, §§ 823 and 928. A similar distinction seems to have existed in Greek also.

[4] Of either sex.

while "a stone" and "a hare" are feminine.[1] The "feminine" also implies affection [2] and also diminutives. The genders are distinguished by special initial sounds.[3] As a general rule the masculine shows a *guttural* while the feminines have a *dental* consonant as initial: thus in Galla *kanka* (thy) is masculine and *tante* is feminine; in Somali the definite article is *ki* for masculine words and *ti* for feminine;[4] in Hausa the third personal pronouns are *ya*, he, and *ta*, she; and the adjective changes its initial letter to indicate a change of gender, thus, *nagari*, "good" is masculine and *tagari* is the feminine. The dental sound in the feminine, mostly a *t*, is a very notable feature in the Hamitic family, a feature which is also shared by the Semitic.

[1] Exactly the same difference of large and small (or strong and weak) marks the gender distinctions in those vernaculars of India which still preserve the grammatical gender. Thus in Gujarati छरो m. a chopper, छरी f., a knife; बंगलो m., a house (bungalow), बंगली f., a cottage; चोपडो m., a large ledger, चोपडी f., a book; गोलो m., a big ball (like a canon-ball), गोली f., a bullet or a pill; पटेटो m., potato, पटेटी f., small potatoes; etc., etc. In colloquial Gujarati* we often change the gender of a noun to indicate derision or ridicule, thus, छवो m. (usually छवी f.) umbrella, is used when we desire to ridicule the person using it or when we wish to call attention to its uncouth shape or size.

[2] The vulgar habit among the students of Bombay of calling each other दीकरो (daughter) or छोकरी (girl) is due to this reason. Parents sometimes affectionately address their sons in the feminine in Gujarati. This last habit is probably also due to the desire of averting the "evil-eye"—sons being regarded as of greater consequence than daughters.

[3] In Nama the *final* letter distinguishes the gender; *khoi*-**b** man, *khoi*-**s**, woman.

* These are often suffixed to nouns to indicate gender, thus, *wala-ki* the brother, but *wala-ti*, the sister.

### (*iv*) *Number.*

The number is indicated in many ways. There is a dual number surviving in Nama but that is practically the only language of Africa (outside the Semitic family) which possesses it.[1] The plural is formed in various ways; but it must be noted that each method implies a special kind of plural, for instance, there are "distributive" and "collective" plurals. Thus in the Ethiopian Khamir language we have *lisa*, a tear, *lis*, tears, *lisse*, floods of tears; *bila*, a moth, *bil*, moths, *bille*, swarms of moths.[2] Small objects like grain, sand, grass, etc., are thought of chiefly in the mass and only on special occasions are they differentiated individually. In such cases these languages show the original word in the *plural* and the singular is formed by adding a suffix, as in the cases mentioned above. Then again objects are divided into various classes in accordance with the special uses to which they may be put, or according to the "categories" to which they may belong. Each of these classes has got a special type of plural. So that the plural suffix serves not merely to

[1] Werner remarks (op. cit., p. 89), "It belongs to the stage of thought when it is not yet perceived that 'one' and 'more than one', are categories which include the whole existing universe...but, e.g. 'twoness' and even 'threeness' are regarded as special conditions needing a separate designation." Some languages of the Melanesian group have four numbers, *singular*, *dual*, *trial* and *plural*. It may be noted that the dual of the Semitic and the I.E. families expresses originally only those objects which *naturally* go in pairs, like eyes, ears and other limbs of the body and that from these it extended also to objects considered two at a time even though not forming a "natural pair".

[2] The English plurals *fishes* and *fish* are exactly of this type; cf. also German plurals, like *Wörter* (disconnected words, as in a glossary) and *Worte* (connected words, as in a sentence).

indicate the plurality but also to indicate the class to which the word belongs.[1]

### (c) *The Law of Polarity.*

Closely connected with the plural in the Hamitic languages is the very remarkable phenomenon known as *the Law of Polarity*. It is noted that *nouns change their gender in the plural*; thus in Somali

*hoyodi*, mother, plu. *hoyöin-ki*
*libahhi*,[2] lion, plu. *libahhyo-di*.

This type of plural with change of gender is also found in Semitic where such plurals are explained as "exceptions."

### § 16. *Explanation of the Law of Polarity: the Fula group of languages.*

In order to explain the Law of Polarity[3] we have to consider the very remarkable group of languages of the Hamitic family called the *Fula* or *Fulfulde*. These languages are found spread over a large area from Sierra Leone to French Guinea. These show very considerable differences from the typical Hamitic languages such as Somali, and so some authorities seem to think that

[1] A somewhat similar purpose is intended by the numerous "words" which are added to indicate plurality (the so-called "numeratives") in Chinese; see *Ency. Brit.*, art. "Chinese Language". Similar are the "numeratives" added to the nouns in Persian and in Bengali, especially with numerals, e.g. तिन जन लोक. Cf. also the use of the German words like *Stück*, *Bogen*, etc. with numerals.

[2] For *libah-ki*; as has been noted above *ki* denotes the masculine and *ti* or *di* the feminine.

[3] The name is taken by analogy from the physical sciences.

they form an independent group of languages.[1] They show on the one hand a distinctly Hamitic structure but at the same time they have many close resemblances with the Ba-ntu. This group is in fact regarded as a transition stage between the Hamitic languages of the north and the Ba-ntu family of the south.[2] The nouns are here divided into various "classes" as in the Ba-ntu, each having a special plural suffix. The one class that stands out more strongly than any other in both the Fula and the Ba-ntu groups is the "person"-class. According to Prof. Meinhof [3] the original division of substantives was into "persons" and "things", or, to put in terms of gender, there were two genders "common" and "neuter".[4] Later, there comes in another distinction of "strong" (or the acting) and "weak" (or the acted upon), or again, in the terms of gender, the genders now are masculine and feminine. Meinhof thinks that when any change of idea occurs (even from singular to plural) the primitive mind also demands a change from the one to the other of these mutually exclusive categories, i.e., from "person" to "thing", or from the "strong" to the "weak", or from "masculine" to "feminine" and vice versa. He adduces many examples from both Fula and Ba-ntu to support his contention. The accompanying diagram from Meinhof's *Sprachen der*

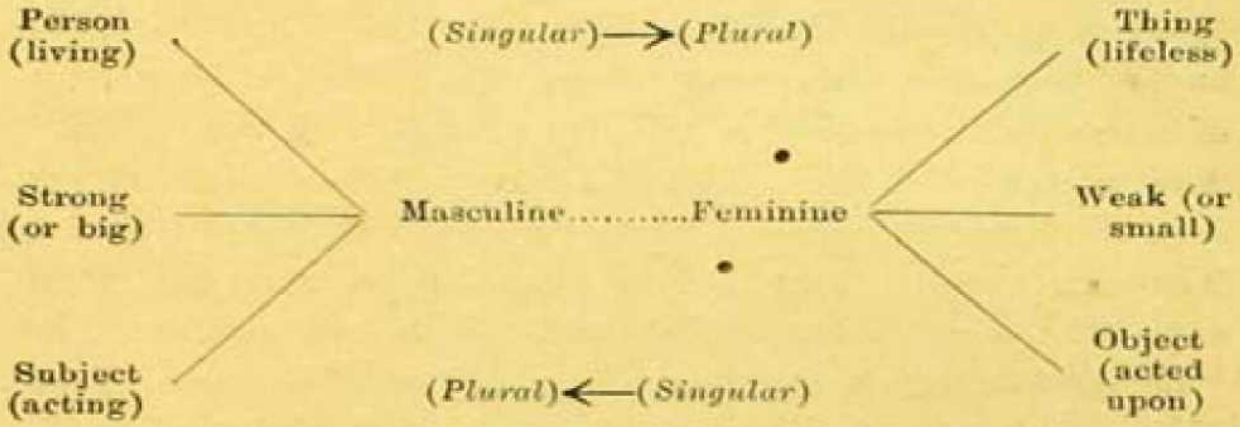
[1] Tucker puts these languages among the suffix-agglutinating type (op. cit., p. 148). Ethnologically too the Fula-speaking peoples present a difficult problem.

[2] Werner calls this group "the key to the Ba-ntu languages" (op. cit., pp. 100 ff.).

[3] Quoted by Werner, op. cit., p. 110.

[4] Based on the fundamental division of things into "living" and "lifeless". A similar idea is at the bottom of the gender distinction in Tamil.

*Hamiten* given by Werner (op. cit., p. 113) explains this position clearly.[1]




## § 17. *Divisions of the Hamitic family.*

The main divisions of the Hamitic are as under :—

- **Hamitic family.**
  - Egyptian branch.
    - Ancient Egyptian
    - Coptic.[2]
  - Ethiopian branch.
    - Bedauya (between the Nile and the Red Sea).
    - Khamir (Abyssinia).
    - Somali.
    - Galla (Western Somaliland).
    - Saho (on the Red Sea opposite Aden).
    - Other dialects.
  - Lybian branch.
    - Libyan.[3]
    - Numidian.[3]
    - Berber dialects (North coasts of Africa).
    - Tawarek (Sahara).
    - Shilha (Western Morocco).
  - Mixed dialects.[4]
    - Hausa[5] (between the Niger and Lake Tchad).
    - Masai.
    - Nama.
  - Fula languages.

[1] I have made some slight changes in it. The diagram would also explain why in Sanskrit the *nominative* of certain neuters is the same as the *accusative* of the masculine.

[2] Coptic has become extinct now, but it contains a lot of Christian literature and is still used for services in the Coptic Church.

[3] Both are extinct now and are preserved in inscriptions only.

[4] These have been much transformed by the influence of the surrounding languages; this has often been to such an extent that Tucker, for instance, classes Hausa among the Negro (or Sudan) group of languages (op. cit., p. 147). The other two mentioned here have been more or less "Ba-ntu-ised." For Masai and Nama see p. 90, ftn. 2, above.

[5] Hausa is generally accepted as the "lingua franca" of Middle Africa.

### § 18. (c) *The Semitic Family.*

The most important member of this family found in Africa is Arabic.[1] This spreads all over North Africa from Morocco to Suez and over the whole of Egypt as well. In Algeria and Morocco it is the official language. The ancient Punic language spoken in Carthage was also Semitic.[2] Further south the ancient Ethiopic or Ge'ez was a Semitic language[3] introduced very early into Abyssinia and its descendant dialects, like the Amharic still survive in Abyssinia, which is the official language of the country. There are other minor dialects of Abyssinia like the Tigre and the Harari which are also Semitic. The details of this family will be considered under the Semitic languages of Eurasia because this family has reached its highest development in Asia.[4]

### § 19. *The Language Families in Eurasia.*

The large land-mass of Eurasia has been from the earliest times the scene of human activity and most of the greater races of humanity and civilisations of the past have taken their rise here. Hence it should not be a matter of surprise to find the most important families of languages in this region. Most of these languages have been satisfactorily classified, but there are still several important ones which have had as yet no definite position assigned to

[1] Arabic was introduced with the Islamic conquest. It has influenced most profoundly the whole of the culture and all the languages of Africa.

[2] Carthage was a Phœnician colony.

[3] Still used in the Abyssinian Church for liturgical purposes.

[4] See below § 26.

them in any of the known families. These constitute a sort of miscellaneous group, and we find such "unrelated" languages among the ancient as well as the modern ones. The large majority of the languages of Eurasia are well cultivated and possess valuable literatures. Many of them have been recognised vehicles of world-wide civilisations in the past, as well as at present. The following are the important linguistic families of Eurasia:

1. The Ural-Altaic family.
2. The Monosyllabic (or Chinese) family.
3. The Dravidian family.
4. The Caucasian family.
5. The Semitic family.
6. The "miscellaneous group" comprising:

    (*i*) Ancient languages, among which the more important are:

        (*α*) Etruscan,

        (*β*) Accadian;

    (*ii*) Modern living languages, among which the chief are:

        (*α*) Basque,

        (*β*) Japanese,

        (*γ*) Korean,

        (*δ*) The Hyperborean group.

7. The Indo-European Family.

Of these the last mentioned family is considered separately by itself in Appendix B, while the Dravidian family and the Tibeto-Burman group of the Monosyllabic family together with the Indo-Aryan branch of the I.-E. family are considered separately in Chapter XII on "the Languages of India."

### § 20. *The Ural-Altaic Family: characteristics.*

This family was named "Scythian" or "Turanian" by the older generation of philologists. It is a "family" of vast extent extending from the Atlantic Ocean to the Sea of Okhotsk and covering the whole of the northern portion of the Old World. It has important offshoots reaching southwards to the Mediterranean. Whether the whole of these could be classed as a "family" in the true sense is doubted by many. There are several important groups, within each of which are contained various closely related languages. But the relationship between the groups themselves are rather hard to determine exactly. They all, however, possess two chief characteristics, *viz.*, (i) Suffix-agglutination and (ii) Vowel harmony.

#### (*i*) *Suffix-agglutination.*

They have one characteristic common to them all, *viz.*, "the typical agglutinative device, by which an unlimited number of specially dynamic terminations may be affixed to an unchangeable root."[1]

#### (*ii*) *Vowel harmony.*

Another very important point of agreement between these languages is the principle of "vowel-harmony." Owing to this the vowel of the main root determines the vowels of all the suffixes.[2] Thus in Turkish *ev-ler*

[1] Tucker, op. cit., p. 130.

[2] *Cf.* the law of alliterative concord in the Ba-ntu languages, Chapter III (§ 45) above.

(houses) but a*l*-*l*a*r* (horses). In Magyar the plurals of the nom., acc., and dat. of *Magyar* are respectively *Magyarok*, *Magyarok*a*t*, and *Magyarokn*a*k* respectively, but the corresponding forms of *Török* are *Törökök*, *Törökök*e*t* and *Törökökn*e*k*. The main root being of primary importance is distinctly uttered, while the suffixes being merely of secondary importance only re-echo, as it were, the predominant vowel. This law of vowel-harmony is of later growth in these languages and the universal prevalence of this law (more or less perfectly) in all the Ural-Altaic languages distinctly points to a common origin. Individual languages differ widely and have changed enormously owing to contact with other language families.[1] The races that use them are for the most part nomads and hence great divergences between dialects are not at all surprising.

### § 21. *Divisions of the Ural-Altaic family.*

The Ural-Altaic family is divided into five main groups:

($\alpha$) Finno-Ugric,
($\beta$) Samoyed,
($\gamma$) Tunguse,
($\delta$) Mongolian,
($\epsilon$) Turko-Tartar.

Each of these have further sub-divisions. The classification given in the table on the next page is not wholly free from objection, but it may be regarded as satisfactory on the whole.[2] It is of course understood that only the more important languages are mentioned here.

[1] Thus Finnish is almost inflecting (I.-E.type) in structure.

[2] From Tucker, op. cit., p. 132 ff.

- **Ural-Altaic family**
  - α. **Finno-Ugric**
    - **Finnic**
      - Finnish (or Suomi).
      - Tschudic (near Lake Onega).
      - Karelian (from White Sea to Lake Ladoga).
      - Livonian (nearly extinct).
      - Lappic (in Lapland).
      - Other Dialects.
    - Permian (near the Urals in E.N.E. of European Russia).[1]
    - Volga-Finnic (or Bulgaric).[2]
    - **Ugric**
      - Vogul } (in N. W. Siberia
      - Ostiak } up to the river Obi).
      - Magyar (or Hungarian).
  - β. **Samoyed**[3] (Scattered dialects along the shores of the Arctic from White Sea to the western parts of the Siberian coast.)
  - γ. **Tunguse**[4]
    - Tunguse dialects (from the Yenisei to the Sea of Okhotsk.)
    - Manchu dialects (in Manchuria).
  - δ. **Mongolian**
    - Mongolian (N. of the Chinese Republic and W. of Manchuria).
    - Kalmuk (or West Mongolian, extending right into European Russia).
  - ε. **Turko-Tartar**
    - Yakut (on the Lena).
    - Khirgiz (in Turkestan and N. of Caspian and of the Sea of Aral).
    - Nogair dialects (of the Cossacks of S Russia and of Crimea).
    - Turkish (or Osmanli).
    - Other dialects.

[1] Spoken only by a small number of people.

[2] So called because the primitive Bulgars had their home in the Volga region. They later adopted the Slavic language as their own—a good example of the fact that race and language are not necessarily identical.

[3] Spoken very sparsely. Tucker estimates the total number of speakers at less than 20,000.

[4] Totally uncultivated.

THE URAL-ALTAIC LANGUAGES.

Of these languages three (Finnish, Magyar and Turkish) have very well developed literatures.

## § 22. *The Monosyllabic or Chinese family: chief divisions.*

The monosyllabic or the Chinese family of languages is a remarkable group of languages spread in a wide area over eastern and South-eastern Asia. Except the Indo-European this is the family which possesses the largest number of speakers. The chief subdivisions are as below:

- Monosyllabic or Chinese family.
  - α. Anamese (Tonkin, Cochin-China, Cambodia)
  - β. Siamese (or Thai)
  - γ. Tibeto-Burman
    - Tibetan
    - Burman
    - Other minor dialects
  - δ. Chinese
    - Cantonese (Kwangtung)
    - Hakka (inland in S. China)
    - Swatow
    - Amoy
    - Foochow
    - Pekingese (or Mandarin)

This is a very closely knit family, the more so because besides the geographical unity there is also a cultural, religious and (to a considerable extent) an ethnological unity as well.[1]

### (α) *Anamese and* (β) *Siamese.*

The Anamese and Siamese are, like Chinese, monosyllabic and positional, but the "roots" are quite different.

[1] The exact relations, however, of these branches have not been settled. Tucker seems inclined to leave it an open question (op. cit., pp. 127-128). He thinks the entire difference of the vocabularies might be due to their having originally belonged to different unconnected groups. But in Chinese itself the vocabularies of the various dialects seem utterly unconnected though the connection can be historically proved. As between the branches we have no distinct proof of connection available, but what happened in Chinese itself might have been a repetition of what had happened earlier between the larger groups.

There has been, however, a considerable borrowing direct from the Chinese. Like the latter too both have developed a system of "tones."[1]

### (γ) *Tibeto-Burman.*

The Tibeto-Burman group is often distinguished into two separate branches, but their close connection is sufficient to warrant their inclusion under one heading. Both Tibetan and Burmese have come very strongly under the influence of Indian languages[2] and hence outwardly both of them (and especially the former) do not seem to be monosyllabic. Tibetan has an extensive literature, and in the early centuries of the Christian era a vast number of works from Sanskrit and Pali relating to Buddhism and to Indian philosophy were translated into it. Burmese too has been a literary tongue and has been considerably influenced by Pali. Detailed consideration of these languages as far as the northern and eastern borders of India are concerned, is reserved for Chapter XII.

### § (δ) *Chinese: chief characteristics.*

The typical language of the *monosyllabic-isolating* family is Chinese. It has been the language of a highly civilized race possessing at least 5,000 years of a very high and uninterrupted culture. It boasts of possessing an unbroken literary record from the earliest times up to the present day. It is a language which has served every purpose of a civilised race in every phase of human activity. The possession of literary records and the high sanctity attached

[1] See below § 23.

[2] Even the alphabets of both these are derived from the Brahmi—the Tibetan through the northern variety and the Burmese through the southern.

to the older classics have undoubtedly helped in keeping the written language uniform. The written language, however, is very considerably different from the spoken.[1] The peculiar characteristic of the language has affected the development both of the spoken as well as of the written dialect.[2] Chinese might possibly have reached its present stage of being an isolating language after having passed through some sort of inflectional stage. There are, according to some scholars, traces of some relics of suffixes to be found among the ancient records. This is, however, at best a doubtful point, and all scholars are by no means in agreement upon this point. As a matter of fact even from the very earliest records we possess the language in substantially the same form as at the present day. The main characteristics of Chinese, following and directly derivable from its monosyllyabic-isolating character, are :

(*i*) development of tones,
(*ii*) coupling of words in pairs,
(*iii*) a special type of writing having one symbol for one word, and
(*iv*) the absence of all *formal grammar*.

[1] In modern Chinese literature however there is a tendency towards a greater agreement between the spoken dialect and the literary idiom. The newspapers and the influence of the democratic ideas are the main causes which have led to this agreement. The old fashioned literary style was too full of obscure allusions to the classics to be intelligible even to an average educated Chinaman without the help of a commentary (Sir Walter Hillier, *The Chinese Language and How to Learn It*, p. 15).

[2] For details see *Ency. Brit.*, art. "Chinese Language" also Giles, *China and the Chinese*, chap. I. The introductory chapters of Sir Walter Hillier's *The Chinese Language and How to Learn It* (pp. 1-36) also give a lot of useful information on this point.

### (*i*) *The tones.*[1]

When the working apparatus of a language is monosyllabic and at the same time no form-building with the help of prefixes or suffixes is allowed we must either have a very large number of distinctly recognisable monosyllabic vocables or must resort to special devices for multiplying these monosyllabic sounds, so as to define clearly what is meant. We may apply this principle to Chinese and see how the language has actually developed under these special circumstances. In Chinese dictionaries we have in round numbers 42,000 separate words.[2] Of these an average educated man might need 4,200 to express his usual wants. If there had been as many distinct monosyllabic sounds in the language there would have been no difficulty. But there are only about 420 vocables capable of being clearly distinguished in the Mandarin or Peking dialect.[3] Hence, on an average, every syllable in the spoken language would have to do the duty of indicating ten different words. This would certainly cause confusion in the language, unless some means were invented to overcome it. This is done by having the ten words under each sound "distributed over four separate groups, distinguished by certain modulations of the voice, known

[1] The Sudan group of languages in Africa also shows this characteristic and for the same reason as Chinese. See § 13 above.

[2] I have used the figures given by Giles in his book (loc. cit.). The great Standard Dictionary, he says, gives 44,000 words.

[3] The Cantonese dialect, however, possesses between 800 and 900 distinct vocables. The comparatively small number in Mandarin is due to the fact that certain sounds are not found in it. Thus voiced sounds (like *g*, *d*, *b*) are entirely absent and there is but one syllable (*erh*) containing *r*. The loss of vocables is due to the ordinary process of "phonetic decay", but partially also to the influence of the Mongol population (*Ency. Brit.*, loc. cit.).

as the *tones*, so that there would be only an average of 2½ words liable to actual confusion".[1] There are homophones in every language, but the context—"the logic of circumstances", as Giles calls it—is quite sufficient to point out what a word means in a particular set of circumstances. These tones are four in number.[2] These form an integral part of the word and together with the vocable serve to define its exact meaning. These have been described as follows:[3] 1st tone: *Dead* (a raised monotone, with slightly plaintive inflection): 2nd tone: *Dead*? (simple query); 3rd tone: *Dead*? (an incredulous query long drawn out); 4th tone: *Dead*! (a sharp and decisive answer). The Chinaman, of course, learns them intuitively and can sharply distinguish them one from the other. Thus $yen_1$ is "smoke", $yen_2$ is "salt", $yen_3$ is "eye" and $yen_4$ is "goose".

### (*ii*) *Coupling words in pairs.*

But this is not enough. There are occasionally tone-deaf persons even among the Chinese[4] and in order that there may be no confusion at all the Chinese define a great many words still further by putting another word in juxtaposition with it. Thus if they want to speak of the "eye", they always say $yen_3$ *ching*, the word *ching* meaning "eyeball" serving definitely to fix the meaning of $yen_3$. So also $yen_2$, "salt" is never pronounced alone but the defining word *pai* (fine) or *hei* (coarse)

[1] Giles, loc. cit.

[2] Chinese writers actually enumerate eight, each of the four tones being subdivided into an "upper" and a "lower".

[3] *Ency. Brit.*, loc. cit.

[4] As evidenced by the story of the Emperor Wu-ti and the learned Shen-yo (A.D. 441-513) who was the first to classify the tones systematically. See *Ency. Brit.*, loc. cit.

is prefixed. This device makes confusion quite impossible in the spoken language even for people who are tone-deaf.

### (*iii*) *Chinese writing.*

But the very special character of the Chinese language is the extremely elaborate system of writing which has been developed and has been used by the people during several millenia. The fact that this system of writing has never advanced beyond the ideographic stage[1] is due directly to the monosyllabic-isolating character of the language itself. The written or classical language is a highly polished medium for the expression of human thought and there is no shade of thought which cannot be adequately expressed in Chinese. The limited number of vocables and the absence of grammatical terminations would have made the syllabic or the alphabetic stage of writing exceedingly confusing, even though means had been discovered to represent the tones.[2] There is another

[1] The history of writing is generally found to be divided into four distinct stages: 1. *Pictographic*, where each symbol is a picture of the thing represented; 2. *Ideographic*, where the symbol does not represent directly the thing it depicts but suggests an idea connected with it; 3. *Syllabic*, when the symbol denotes a *sound* (appealing to the ear) or a syllable (generally the first) of the word represented by it and 4. *Alphabetic*, where the first element of the syllable is represented by the symbol. The hieroglyphs of Egypt and of Mexico and the Cuneiform of Babylon and Assyria have passed more or less through all these four stages. Chinese writing never progressed beyond the second stage in China itself, but when borrowed in Japan it went into the third stage, and in Korea even into the fourth. For details, see Clodd, *Story of the Alphabet*, pp. 86 ff. also Isaac Taylor, *The Alphabet*, Vol. I, chap. I.

[2] It may be noted that the coupling of words in pairs is a device used chiefly in the colloquial, but not in the highly ornate and intricate Chinese of the classics.

reason besides, viz., that the gradual development of the language would inevitably lead to variations in the sounds of words, and the dialectical variations also would make the confusion still worse, because the same sound would in different dialects (or at different periods of the same dialect) mean quite different things. The written characters, being developed directly as a result of the special characteristics of the language, are thus the visible signs of the Chinese genius and are the most potent binding and stabilising force in Chinese culture. These appear at first sight to be exceedingly confusing, but a patient study discloses a very elaborate method about this writing.[1] There are ideographic as well as phonetic elements in each character, and to a practised student each character conveys at once the exact idea as well as the sound. The full value of this elaborate scheme of writing could be understood from the fact that modern ideas of the West have been successfully represented by the Chinese in their script.[2] Modern missionaries have been trying to introduce some variety of Roman script for Chinese with appropriate marks for the tones but the result has been "a mere jumble of sounds, utterly unintelligible".[3] But quite apart from this difficulty of a clear phonetic representation of the Chinese language there is the most important consideration of the essential characteristics of the Chinese writing. Giles explains this aspect in very clear words.[4] "The characters are a potent bond of union between the different parts of the empire

[1] For details consult the authorities cited above, p. 107, ftn. 1.

[2] e.g. "discuss-govern-country-assembly" for Parliament, or "rise-descend-machine" for a lift, or "exclude-opposite" to denote the Absolute.

[3] An alphabet consisting only 39 signs in all has quite recently been invented by the Chinese Board of Education. However, see Giles in the article in *Ency. Brit.*

[4] Ibid.

with their various dialects.[1] If they should ever fall into disuse, China will have taken a first and most fatal step towards internal disruption. Even the Japanese, whose language is not only remarkably free from dialects, but polysyllabic and therefore more suitable for an alphabetical script, have utterly refused to abandon the Chinese script, which in spite of certain disadvantages has hitherto triumphantly adapted itself to all the needs of civilised intercourse ".[2]

### (*iv*) *The absence of formal grammar.*

This last is perhaps the most remarkable characteristic of this group of languages. The Chinese have never had any works on "grammar" in our sense of the term. In fact, they "do not possess and never have possessed in their language any term equivalent to 'grammar.' The language is quite beyond the reach of the application of such rules as have been successfully deduced from Latin and Greek ".[3] As far back as we can get literary records in Chinese (and they go back to at least ten centuries B.C.)[4] we find that the language has been monosyllabic and "these monosyllables seem always to have been incapable of inflection, agglutination or change of any kind. They are in reality root-ideas, and are capable of

[1] Not only within the geographical limits of China but within the wider "Empire of Chinese Culture" the writing is the most powerful bond of union.

[2] Moreover it would be foolish to suppose that such an eminently practical people like the Chinese and the Japanese would have stuck to this admittedly cumbrous system of writing, unless they were convinced of the compensating advantages.

[3] Giles, *China and the Chinese*, loc. cit.

[4] Giles (*Ency. Brit.*) indeed mentions that some of the national ballads might be assigned to the 18th cent. B.C.

adapting themselves to their surroundings, and of playing each one such varied parts as noun, verb (transitive, neuter or even causal), adverb and conjunction".[1] The Chinese themselves have never produced any work on formal grammar for the simple reason that their language does not lend itself to this sort of treatment. They classify their words into "full" and "empty" and the former again into "living" and "dead". "Living" words are those which denote an action or activity of some type and "dead" are those which indicate things acted upon.[2] The "empty" word is one which merely serve to define more closely the sense of another ("full") word to which it is attached, and consequently these "empty" words most nearly approach our grammatical suffixes.[3] Thus the word *liao*, which by itself stands for the idea of "completion", when used as an "empty" word, corresponds to the inflection of the past tense in the I.-E. languages; e.g. *t'a lai* (he comes), but *t'a lai liao* (he came, lit. "he come finish"). The various "numerative" particles employed in Chinese often serve merely as "empty" words to indicate the plural. In short *every word is a root-idea*, and only its use in a sentence can determine whether it is to be a noun or an adjective or a verb (active or passive or causal). Thus the word *ssu* may mean, "to die", "dead" or "to kill" according to the context. The context is determined chiefly by common

[1] Giles, *China and the Chinese*, loc. cit.

[2] Giles (*Ency. Brit.*) seems to imply that the "living" and "dead" words correspond to our verbs and substantives respectively. But this correspondence is not to be taken too literally. This division seems to be based more upon the fundamental difference of types as has been discussed above under the Law of Polarity (§ 16).

[3] On this account some people have maintained that these "empty" words are the relics of a prehistoric stage of the Chinese language when it was inflected.

sense and after some practice it is easy enough to get into the Chinese style.[1] Thus a sentence like "*affair why must ancient*" would mean in ordinary language, "why need one stick to the ways of the ancient in this matter?" So also "*home one below heaven*" would mean "all under the canopy of Heaven are one family". And "*few what see many what strange*" means "the less a man sees, the more he has to wonder at".

## § 24. *The Dravidian family.*

This is a typically agglutinating family of languages which has been profoundly influenced by the Aryan group of languages. It has been confined only to India and so it is discussed in detail in the chapter on the Languages of India.[2]

## § 25. *The Caucasian family.*

The Caucasian family had for some time been put among the inflecting languages, but they are now classed definitely among the agglutinating languages. Both suffix and prefix-agglutination are found and the object pronoun is even incorporated with the verb. Then again the agglutination is in many cases indistinguishable from pure inflection. In verbal conjugation, for example, it is very hard sometimes to make out even the "root".[3] The

[1] "Pidgin-English" is in fact Chinese spoken with English words. When a Chinaman wishes to say "Do you want me?" he says, "You wantchee my no wantchee", for he merely translates word for word the Chinese *ni yao wo pu yao*. Of course the book language needs far greater practice, because the style is very terse and always full of allusions to the ancient Classics.

[2] Chapter XII.

[3] Thus, in the forms *ara*, *ura*, *aisara*, *unda*, *anda* and *ā* it is hard to know that the root is *ai*, to make. (Tucker, op. cit., p. 150.)

reason for the very complicated structure of these languages probably lies in the fact that this region has been all through history a refuge of various peoples from both Asia and Europe, when hard pressed by invasions of warlike tribes. The extremely mountainous character of the region has resulted in the formation of a large number of dialects.[1] These dialects have developed more or less in utter independence of each other and it is sometimes difficult to imagine that they have all had a common parent. The main divisions of this family are indicated in the following table:

- Caucasian family
  - North Caucasian[2] (or Circassian)
    - Circassian (Western)
    - Kistian (Central)
    - Lesghian (Eastern, in Daghestan on the Caspian)
    - Other dialects.
  - South Caucasian (or Kartvelian)
    - Georgian
    - Suanian
    - Mingrelian
    - Other dialects.

## § 26. *The Semitic family*:[3] *its position among the other languages.*

This is the best developed and the best known family of languages after the Indo-European. Its monuments go back to a very remote antiquity and in the ancient days this family was the most important of the linguistic families of the world, because the people with the greatest political power in those days were the speakers of Semitic languages. Though not possessing any longer the political importance of ancient days this is still second only to the

[1] As was the case also in Greece.

[2] The mutual relations of the languages of this group have not as yet been clearly made out, but with the Southern group the relationship of the languages are fairly clear.

[3] See especially Tucker, op. cit., pp. 158-172.

Indo-European family of languages. The various Semitic languages have developed religious literatures of profound significance in the history of the world. Another important respect in which the Semitic languages have been of importance is that these languages have given the alphabet and the art of writing to most of the peoples of the world to-day.[1]

### (*i*) *Semitic and Hamitic.*

This family is most closely related to the Hamitic;[2] so much so that some philologists are distinctly of opinion that these two families form "one linguistic unity". The most characteristic features of Semitic languages—viz., trilateral roots—is undoubtedly absent in the Hamitic, but a long separation and the influence of foreign idiom might conceivably have broken down the structure of the Hamitic languages.[3] But the points of resemblance are so close that even though few in number they are "unusually significant".[4] These points of contact might be enumerated thus:

1. The tense system of both families is based upon the fundamental difference of completed and incomplete action. The time idea is secondary.[5]

2. The plural suffixes of nouns in both families are probably of common origin.

[1] China and India are the only countries of the old world at present whose alphabets are of indigenous growth. And as for the latter, some scholars definitely trace the earliest Indian alphabet (the *Brāhmi*) to Semitic sources.

[2] See § 15 above.

[3] Probably the same kind of complete break-up of grammatical structure has occurred in the Polynesian family as compared to the Malayan; see § 7 above.

[4] Tucker, op. cit., p. 160.

[5] See § 15 (*ii*) above.

3. The *-t* used as a sign of the feminine is also characteristic of both.

4. The possession of "grammatical gender" is common to both.

5. The pronouns in both the families are beyond all doubt identical in origin.

These points, though only five in number, are of great importance, the last point particularly might be considered as almost conclusive. Pronouns form perhaps the most stable element in a language and they do not change appreciably even after a long interval in spite of a great deal of foreign influence.

### (*ii*) *Semitic and Indo-European.*

Between peoples speaking the Semitic and the Indo-European languages there have always existed very close and intimate cultural relations throughout human history. Doubtless the mutual influences of the two types of languages on each other have been very deep and lasting. But how far the two types have materially affected each other's structure has not yet been definitely made out. There are certain resemblances of detail which are, indeed, remarkably striking, but these might well have been only borrowings on one side or the other. There is also another explanation possible of these resemblances, viz. that both these types had a common ancestor. But if this were the case, that common ancestor must be put long anterior to any historical records. The whole subject is exceedingly interesting but very complex and no definite attempt had been made towards solving it until quite recently.[1] We may however mention that the meeting

[1] See chap. III above, p. 68, ftn. 1.

place of the Semitic and Indo-European peoples was chiefly in Mesopotamia and at an earlier period somewhere further West.[1] Three languages of great interest to philological students show in different degrees what the results of a mingling of these two types might produce. These are, in chronological order, (1) the languages of the Hittites as deciphered from the Boghaz-küei inscriptions, (2) Pahlavi or Huzvaresh which developed in Persia during the first three centuries of the Christian era and (3) Urdu which was admittedly a hybrid produced under the stress of the Islamic invaders of India. The last shows the Semitic influence chiefly in the very large percentage of purely Semitic words used. About the Pahlavi (or Huzvaresh), though essentially it is an I.-E. language still the proportion of the Semitic element in it is so large that for a long time it was thought to be a Semitic language.[2] About the language of the Hittites a controversy is still raging as to whether it is a Semitic language largely influenced by Indo-European or an Indo-European language largely modified by Semitic.[3]

The main points of contrast between the Semitic and the I.-E. languages are :

1. The trilateral roots of Semitic are unknown in I.-E.

2. The flexion in Semitic is mainly internal, whereas in I.-E. it is by suffixes only.

3. There are no true compounds in Semitic. The only compounds allowed in Semitic are of the nature of

[1] In the kingdom of the Hittites.

[2] See Haug, *Essay on Pahlavi*.

[3] Prof. Sayce strongly favours the first view, whereas Prof. Hrozny, who has worked long at these inscriptions, as strongly supports the second view. See "The Decipherment of the Hittite Language" by S. J. Crawford, *J.R.A.S.*, 1919, see also below Appendix B.

the षष्ठीतत्पुरुष—i.e. "juxtapositions of two nouns", one being "governed" by the other, or standing to it in the relation of genitive.[1]

4. *Prefixes* are largely employed in Semitic languages to form derivative conjugations such as causals, reflexives etc. But in the I.-E. no *grammatical* form is built up with a prefix.

§ 27. *The chief characteristics of Semitic languages*:

(*i*) *Trilateral roots.*

The most striking features of Semitic languages is that the "root", or the ultimate form from which all others are derivable, consists of *three consonants* which remain unvarying throughout the whole series of derived words.[2] The fundamental idea conveyed by the root is represented by its three consonants.

(*ii*) *Internal flexion.*

But merely a group of three consonants would be unpronounceable; vowels must be used in order that roots like *qtl*, *ktb*, *nsr* etc. might be uttered at all. And the whole structures of Semitic syntax depends on what vowels are used to help in the pronunciation of these roots. These vowels, in fact, are the essential morphological machinery of these languages and they vary in quality,

[1] Tucker, op. cit., p. 163. These compounds are mostly proper nouns like *Ben-Jamin*, *Beth-Shemesh*. It may also be noted that in such compounds the word-order in Semitic is exactly the reverse of that in I.-E. The two examples given may be translated in Sanskrit as यमिन-पुत्र: and सूर्य-भवनम् (*Shemesh* = सूर्य).

[2] See, for instance, the table of 70 derived forms from Arabic given by H. A. Salmoné, in his *Arabic Dictionary*.

quantity, position and number. To put the same thing in other words, the Semitic flexion is mainly *internal*.[1] And this internal vowel change is supplemented by the addition of prefixes and suffixes.[2] All derived nominal and adjectival forms are also built up in the same manner. The nearest parallels in the I.-E. languages to this internal flexion of the Semitic are the Ablaut and Vowel-gradation.[3] But in the Semitic languages the vowel change is different in its very nature. In the I.-E. languages, it is by no means systematically used nor is there any grammatical signification attached to this change. The I.-E. Ablaut is essentially a phenomenon resulting from the shifting of the accent and as such it is concerns the phonology of this family, *not* the syntax, as is the case with the Semitic family.

### (*iii*) *The use of prefixes and suffixes to supplement internal flexion.*

As mentioned above the internal flexion is supplemented by the use of prefixes and suffixes. The use of prefixes as a part of the syntactical machinery is also a distinguishing characteristic of these languages. The most notable use of the prefix is for the formation of derived conjugations. In Arabic there are no less than fifteen such derived conjugations.[4] Thus from the root **ktb**, to write we get *á***kt***a***b***a**, he caused to write (i.e. he dictated) ; *ta***k***ā'***t***a***b***a**, he mutually corresponded ; *in***k***á***t***a***b***a**,

[1] See the example from the root *qtl* given in chap. III, § 46 (*i*).

[2] See below sub-section (*iii*).

[3] The गुण, वृद्धि and सम्प्रसारण of Sanskrit. See further chap. X below.

[4] Also called "voices" in some grammars.

it was written ; ikt*áta*b*a*, he wrote from dictation ; *istá*kt*a*b*a*, he asked some one to write ; and so on. In the verbal tenses the completed action (the "perfect") is denoted by a suffix, whereas a prefix denotes an incomplete action (imperfect or continuous). Thus, k*a*t*a*b-*at*, the wrote, but *ta*-kt*u*b*u*, she writes ; so also k*a*t*a*b-*nā*, we wrote, but *na*-kt*u*b*u*, we write.

### (*iv*) *Grammatical gender.*

The possession of grammatical gender as opposed to natural gender is shared by this family in common with the Hamitic and the I.-E. families.[1] This is regarded by many as an argument in favour of an ultimate common ancestor for all these three families. In this connection mention may also be made of the fem. suffix, -*t*, which is also found in Hamitic.[2]

### (*v*) *Case relations expressed only by three suffixes.*

There are only three cases clearly distinguished by suffixes. The use of particles in primitive Semitic had to a certain extent prevented the formation of many cases by means of suffixes. The three cases are nominative, accusative and genitive, though the uses of the latter two are not the same as those of the I.-E. accusative and genitive. In fact these two oblique cases cover not merely the ground of all the oblique cases of the I.-E., but are also used to express adverbial and adjectival relations as well.

[1] § 15 (*iii*) above.
[2] Ibid.

(*vi*) *The amalgamation of possessive and objective pronouns.*

Possessive pronouns are suffixed at the end of the noun "possessed", e.g. Ar. *katab*-**i**, my book; Heb. *El*-**i**, my God. This device has been adopted into Persian also. So also the direct object of a verb if a pronoun is also suffixed to the verb, e.g. Ar. *daraba*-**ni**, he struck me.[1]

(*vii*) *Absence of true compounds.*

This has already been considered above as one of the main points of difference between the Semitic and the I.-E.[2]

(*viii*) *Use of particles and the consequent development of the analytical type in modern Semitic.*

The case suffixes were, from early times, supplemented by the use of particles to indicate, or rather to emphasise and to make clearer, the relations of words in a sentence. In course of time, by regular phonetic decay (as happens in every language) the suffixes tended to be obliterated were largely replaced by these particles. Thus in course of time the languages became more and more analytic. The most marked advance in this direction is to be noted in modern Hebrew.

(*ix*) *The difference between the various languages of this family is much smaller than in any other family languages.*

The essential feature of Semitic languages, viz. that in each word the consonants supply the idea and the

[1] Root *drb*, to strike. See also p. 61, ftn. 2.
[2] § 26 (*ii*) above.

vowels the syntax, has led to a remarkable stability in them, both as regards space and time. The various languages of this remarkable family "stand to each other ...in the relation of accentuated dialects."[1] Practically the only differences between these languages are phonetic. And even if a language is considered historically, we find that the differences at various stages of growth are chiefly due to the phonetic decay of affixes and an increased use of particles, in other words, the differences are mainly due to a growth from synthesis to analysis. The simplicity and regularity of primitive Semitic grammar is responsible for this state of homogeneity in this family. There was no great wealth of form in the primitive speech, so that each language as it branched off had to choose its own forms from among a limited number. Neither was the structure of this type in itself such as could admit of any considerable variation.

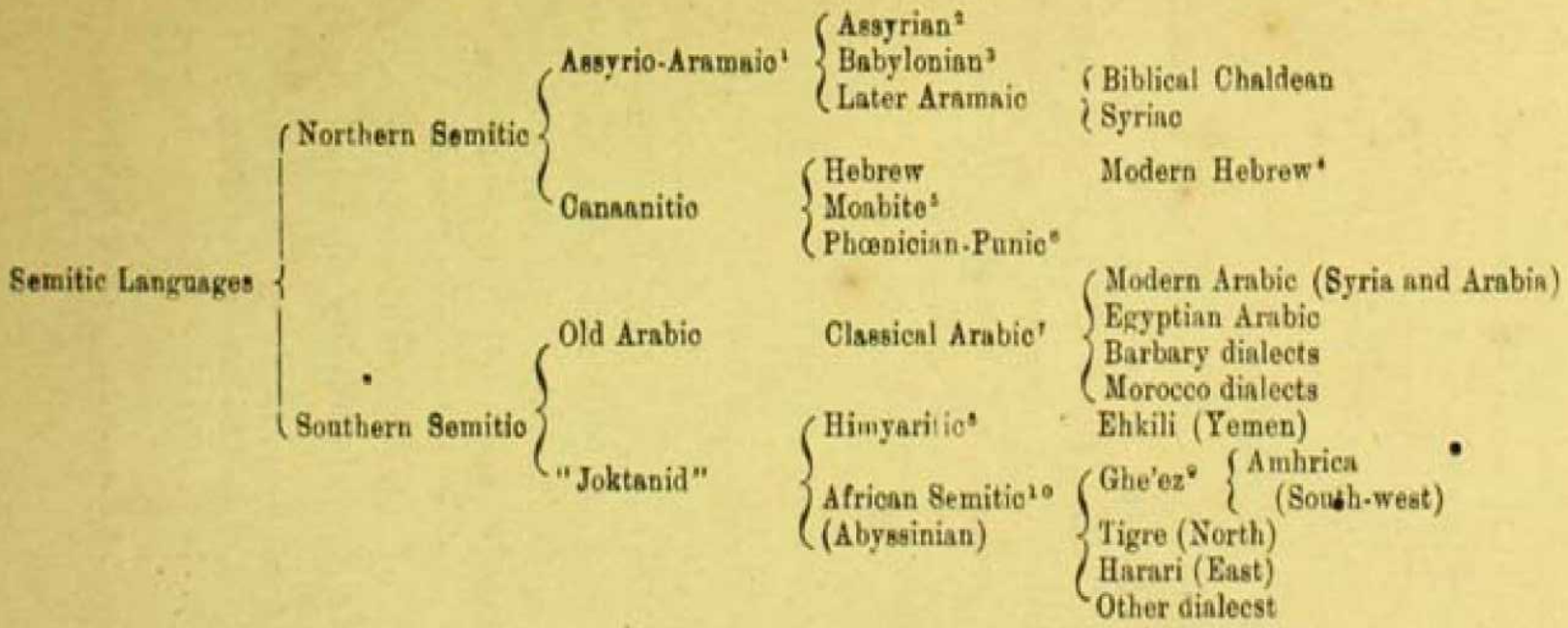
## § 28. *The chief branches of the Semitic Languages.*

These are shown in the table on the next page.[2]

[1] Tucker, op. cit., p. 165.

[2] Adapted (with some omissions and alteration) from Tucker (op. cit., p. 167).

## Semitic Languages.




[1] The early Aramaic had become the common language of Syria, Mesopotamia and Chaldæa as early as 800 B. C.

[2] "It presents us, on the whole, with an archaic form of Semitic speech. In fact Assyrian may justly be described as the Sanskrit of the Semitic idioms" (Sayce, *Introduction to the Science of Language*, Vol. II, pp. 168-169).

[3] Babylonian and Assyrian are both literary languages and the differences between them are so slight that they might be regarded ss merely dialectical.

[4] Modern Hebrew is a blend of Aramaic, Greek, Latin and Hebrew. Moreover the Jews have also borrowed largely from the languages of the lands where they have settled. A very remarkable instance of such admixture is the *Yiddish* spoken by the Jew of Prussia.

[5] The dialect of the famous Moabite inscription, 900 B.C.

[6] The language of Carthage. It is known only from inscriptions. St. Augustine (a Carthegianian himself) had noted the similarity of Punic and Hebrew.

[7] Classical Arabic comes very near the Primitive Semitic in structure. It was the dialect of the Quraysh clan of central Arabia and the influence of the Prophet and of the *Quran* raised it to its commanding position.

[8] Known through inscriptions.

[9] Semitic speech was carried into Africa across the Red Sea in prehistoric times.

[10] At one time (up to the 14th century) the court language of Abyssinia. At present it is used as the language of ritual only.

## § 29. *The unclassified languages.*

### (*i*) *Ancient languages.*

In spite of all elaborate methods of classification adopted by philologists there are still some languages which defy proper classification. They show no striking affinity to each other nor to any known language family. Two such are ancient and dead languages, viz. *Etruscan* and *Shumerian*.

### (*a*) *Etruscan.*

The Etruscan, which flourished in north and central Italy before the rise of Rome, was long thought of as belonging to the I.-E. family. Now, however, scholars prefer to leave open the question of its position among languages. We possess a few inscriptions in this language and a small book which was discovered in a mummy case.[1]

### (β) *Shumerian or Akkadian*[2]

This language was already extinct before the seventh tury B. C., but it is known very well indeed to scholars. The Shumerians were the original rulers of Babylon and they had developed a high degree of civilisation and had left a copious literature on all sorts of subjects to their successors, the Assyrians. These latter accepted the culture and carefully studied the ancient language and we get grammars and lexicons of the ancient tongue written in the Assyrian and we get also many Shumerians texts

[1] It was the publication of this book, in fact, which cast a doubt upon the supposed I.-E. affinities of this language. See *Ency. Brit.*, art. "Philology"; Tucker says (op. cit. p. 190) that it "is almost certainly not Indo-European".

[2] This name is not correct. The Akkads proper Semitic language spoken.

edited with parallel Assyrian translations. The language is of the agglutinating type, with incorporation of the objective pronoun. It is regarded by many as the prototype of the Ural-Altaic family but the question has not yet been definitely settled.

•

### (*ii*) *Modern Language.*

### (*a*) *Basque.*

Among the unclassified living languages the most remarkable is Basque which is confined to a small district in West Pyrennes. There are at least eight clear dialects. The language is agglutinating in the main but the verbal system is distinctly of the polysynthetic type.[1] "In an organised system of classfication Basque would come midway between the American families of languages and... Ugrian".[2] Some of the remarkable features of this speech are:

1. The article is a postposition, e.g. *zaldi*, horse ; *zaldi*-**a**, the horse.

2. The pronouns show a superficial resemblance to the Semitic and Hamitic pronouns.

3. Gender distinction is found in verbal forms only, but the strangest peculiarity is that the gender of the *person addressed* is to be taken into account ; e.g. *eztakit* means "I do not know it", but if a woman is addressed, it becomes *eztaki*-**na**-*t*, "I do do hot know it, O woman", while to a man one should say *eztaki*-**a**-*t*,[3] "I do not know it, O man". Not only this, but there is a form of respect *eztaki*-**zu**-*t*, "I do not know it, O respected one",

[1] See Chap. III, § 43 (ii), above.

[2] *Ency. Brit.*, art. "Basque".

[3] For *eztaki*-**ka**-*t*.

and a "childish form", *eztaki*-**chu**-*t*, "I do not know it, O child".

4. The verbal system is very complex because it incorporates the subject pronoun as well as the direct and indirect objects, when pronomial. There are at least 24 distinct forms for each "verb". The "verb" itself, however, has no independent existence.

5. The two tenses present and imperfect are distinguished by the position of the subject. In the former it is suffixed in the latter it is prefixed; suffixed e.g. *daki*-**gu**, we know it", **gi**-*naki*, "we knew it".[1] There are periphrastic or participal conjugations of later development under the influence of French and Spanish.

6. Compounds are possible but in the "polysynthetic" manner, i.e. the words joined drop one or more syllables. Thus, *odei* (cloud) + *ots* (noise) gives *odots* (thunder), so also *belar* (forehead, or front) + *oin* (leg) gives *belaun* (knee, lit "front of the leg").

7. The vocabulary is poor and peculiar. Abstract ideas are almost completely lacking. In several cases the vocabulary reminds us of the speech of some of the most primitive peoples. Thus *arreba* "a man's sister" and *ahizpa* is "a woman's sister", but there is no word to express the idea of "sister".

8. The syntax is quite simple the verb generally being at the end.

### (β) *Japanese.*

The Japanese language is by many classed as one of the Ural-Altaic family. It is certainly of the suffix agglutinating type but the other characteristics are not so clearly marked. The language is a highly developed one,

[1] A similar distinction is fonnd in Semitic, see § 27, vii, above.

and there is a sharp distinction between the written and spoken language, and in the latter variety between the "noble" speech (that of the higher classes) and the vulgar speech. The agglutination is also of a fairly loose type, in many cases the suffix being written quite separately. Another peculiarity is the use of reduplication to express plurality. The phonology of Japanese, especially of the colloquial, is very peculiar and complicated. The influence of Chinese culture and Chinese language is clearly marked and the Japanese have very extensively adopted the Chinese ideograms in their writing.

### (γ) *Korean.*

The official language of Korea is Chinese, but the native tongue of the people is a suffix-agglunating language The affinities it may have with the Ural-Altaic family have not yet been made out clearly enough.

### (δ) *The Hyperborian group.*

This group occupies the north-east peninsula of Asia east of the river Lena coming down as far south as Sakhalin. The chief dialects are (1) the Ainu dialects, (2) Ghiliak (of Sakhalin) and (3) the dialects of Kamtchatka. There is no definite proof that these dialects are in any way even interrelated.

# APPENDIX B.

## The Indo-European Languages.

### § 1. *Resumé of the chief characteristics of the I.-E. family.*

While considering the chief types of language we have already noted in some detail the main distinguishing characteristics of the I.-E. family.[1] It may be just as well to recapitulate them here once again :

1. Suffix inflection,
2. Originally synthetic in structure but getting more and more analytic in course of development,
3. Monosyllablic roots with the addition of primary and secondary suffixes,
4. Syntactical prefixes unknown,
5. The power of making true compounds,
6. Vowel-gradation.
7. Flexions in great variety.

This family is the only one of the inflecting type in which the flexion is external and the root is dynamically invariable.[2]

[1] Chapter III, § 47, above.

[2] Except within the limits of Ablaut and Vowel-gradation and even this happens only in a certain number of cases and not as an invariable rule.

## § 2. *The name "Indo-European".*

This family of languages has been called by various names. The older name favoured by Max Müller and even now loosely used by certain writers is the name *Aryan*. In course of time it was found more practicable to restrict the name to the eldest branch of this family, the Indo-Iranian; to the languages, namely, of those peoples who called themselves by the proud name of *Ārya*.[1] The name *Indo-Germanic* (now used chiefly by German scholars and a few others outside Germany) was coined at a period when the Indian languages in the East and the Germanic in the West, marked the bounds of this family. But since that period new branches have been recognised, and Keltic now forms the western limit.[2] It is obviously impossible to keep on changing names as the limits extend further. The name *Indo-European* is accepted now by practically all English and most of the non-German European writers and might be admitted as being the least open to objection, for it does not so much suggest the termini, as the two great land-masses in which these languages predominate.[3]

## § 3. *The twofold division of the I.E. family into* centum *and* śatam *groups.*

The I.-E. languages are divided into two main groups known as the *centum* and the *śatam* (शतम्) groups. So

[1] Skt. आर्य, Av. *airya*, O Pers. *ariya*.

[2] The name *Indo-Keltic* had been once suggested but was not accepted.

[3] *Sanskritic*, *Caucasian* and *Japhetic* (on analogy of Semitic and Hamitic) are open to obvious objections.

far this division line is the most clearly marked, and there is no overlapping, nor any neutral ground where characteristics of both groups might be found, as is almost invariably the case with other linguistic divisions. These two groups are mutually exclusive. This division line was first clearly made out by Ascoli in 1870. He pointed out that the parent I.-E. speech possessed a set of palatal sounds.[1] Of these the $\widehat{k}$ had a twofold development in the various branches. In one group it developed into the *velar*[2] or *k*-sound and in the other group it developed into a *sibilant* i.e. a *ś* (श्) or *ś* (ष्)-sound. And these two divisions were named after the typical word illustrating this, the word for "hundred" which goes right through all the I.-E. languages.

Thus; I.-E.* $\widehat{k}$*mtom*[3]; Lat. *centum*, Grk. ἑ-κατον, O. Irish *cēt*,[4] Goth. *hund*[5], Tokharish, *kandh*;

Skt. शतम्, Av. *satam*, Lith. *szimtas*, Russ. *sto*.

When this twofold division was first formulated by Ascoli it was thought that this division marked out the Western and the Eastern languages. But the recent discovery and decipherment of Tokharish in 1902-3 and 1904-5 has upset this idea, because it is, though a *centum*-language, far to the east.

[1] Represented usually as $\widehat{k}$, $\widehat{kh}$, $\widehat{g}$, $\widehat{gh}$. The sounds were probably the same as the Skt. palatals.

[2] Usually called *gutteral* in older books and in Skt. grammars. It is better to speak of *velars* as the term indicates the point of contact. Note, also, that this sound was represented in Lat. by the letter *c*, hence pronounce *centum* as केन्टुम् (*not* सेन्टम्)

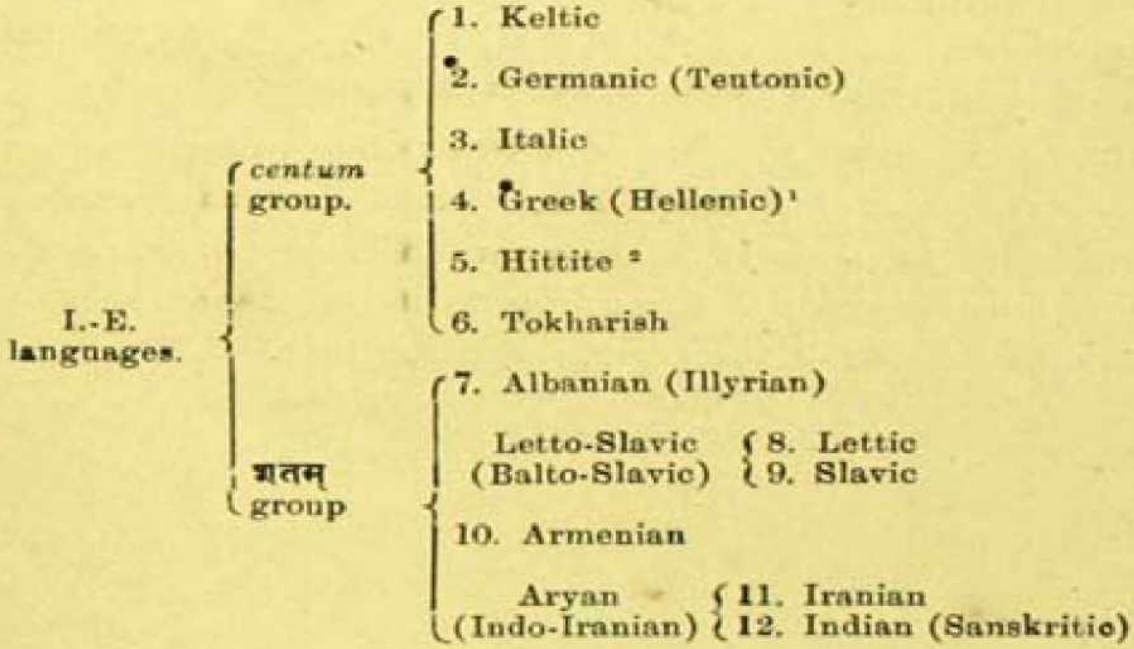
[3] An asterisk * placed before a word indicates that the form is hypothetical. The *m* is what is called a *sonant nasal*.

[4] Pronounce केत्

[5] The *h* in Goth. is to be pronounced like the *kh* in Persian. The change from *k* to *kh* in the Germanic group is explained by "Grimm's Law". See below chap. IX.

## § 4. *The branches of the I.-E. languages.*

The following table shows the various branches of the I.-E. :




[N.B.—These languages are arranged from West to East in each group.]

## § 5. *The inter-relations of the various branches of the I.-E.*

We thus see that the I.-E. family is a very widely spread family and includes a large number of languages. Necessarily, therefore, the mutual relations between these various branches would be very varied and complex. Every branch has a point of contact with each of the rest and hence if we desire to bring out even the main points only of resemblance graphically, we cannot do so by

[1] Some extinct branches like the *Dacian, Thracian, Phrygian* etc. are omitted.

[2] I am accepting Prof. Hrozny's view.

means of a "genealogical table". The limitations of a "family-tree" arrangement would convey the false notion that the extremes, at any rate, have nothing in common and except for the various divisions of the any one branch it would not convey any information regarding the very intimate relations which hold all these branches together. The diagram facing this page shows rather in a rough manner (and only in regard to a few points), how complex the inter-relations in truth are.[1] It shows the various connections in a twofold manner, because it is partly geographical (at any rate going from west to east) in addition to showing the various relationships.

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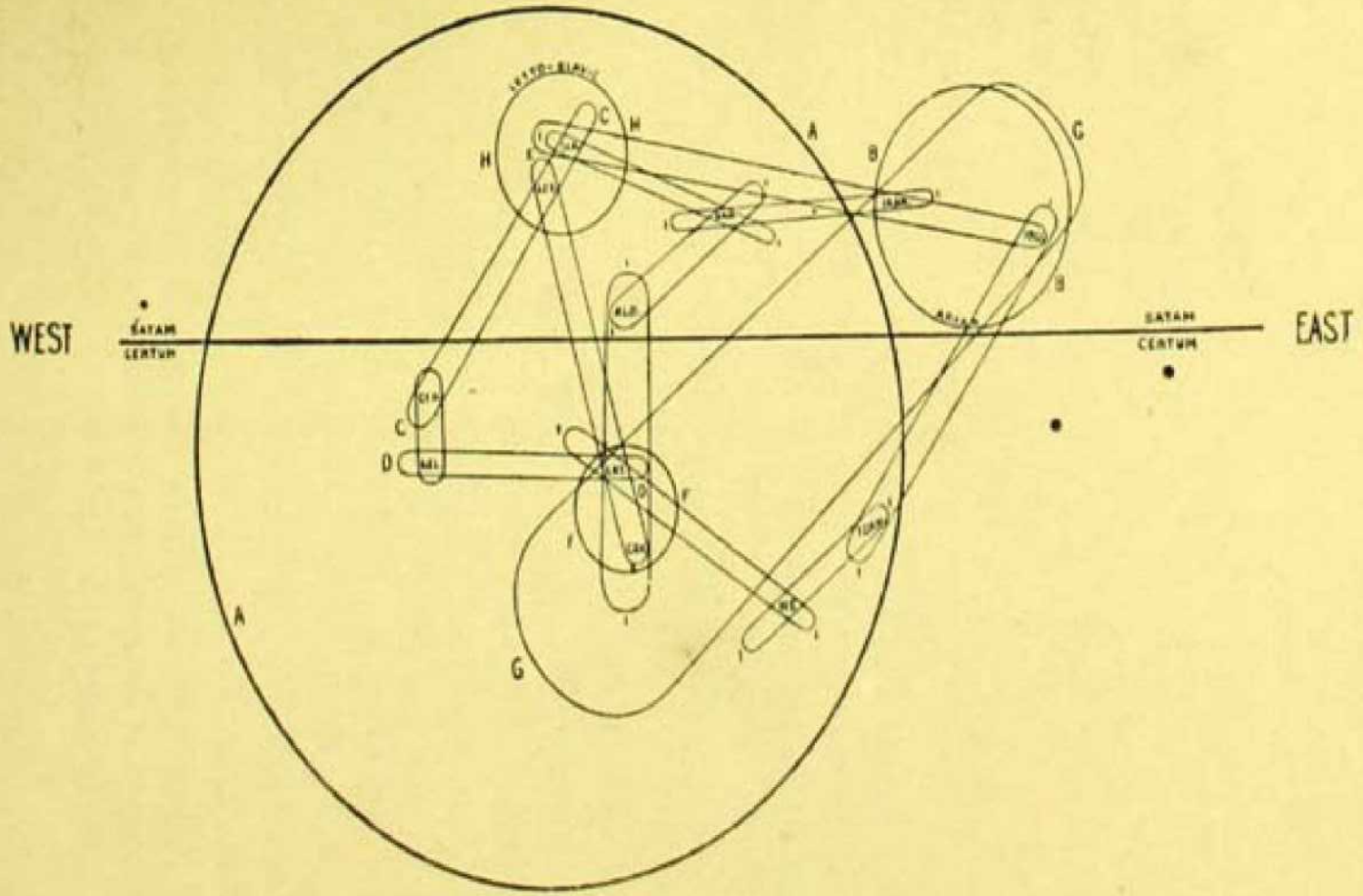
### Explanation of the Diagram.

The red line indicates the division between *centum* and *śatam* Languages.

A-A Distinction of I.-E. **a*, **e* and **o* preserved.
B-B The *Aryan* Branch.
C-C I.-E. **bh* changes to *m*.
D-D Passive in *r*.
E-E *oi* or *ei* in nom. plu.
F-F Gen. sg. ending of *o*-stems generalised.
G-G Imperative 3rd plu. ending I.-E. **-onto* (अन्त)
H-H The *Letto-Slavic* Branch.
I-I Not clearly made out but connection does exist.

[1] The diagram is based on one given to us by Dr. Peter Giles, Master of Emanual College, Cambridge, in the course of his lectures on Comparative Philology. He had apparently based it on the one given by Schrader in his *Sprachvergleichung und Urgeschichte*.




Facing p. 130.

### (*ii*) *Divisions of Keltic.*

The chief languages of this branch are:

- Keltic Branch
  - Gaelic (Goidelic) [*q*-Keltic].
    - Scotch Gaelic[1]
    - Manx[1]
    - Irish (Erse)[2]
  - Gallic (Old Gaulish)
  - Britannic (Brythonic or Cymric) [*p*-Keltic].
    - Cymric (Welsh)[3]
    - Cornish[4]
    - Breton (Armorican)[5]

## § 7. *The Germanic (or Teutonic) branch.*

### (*i*) *Characteristics*:

This is perhaps the most widely spread branch of the I.-E. to-day and one of the languages of this branch promises to be the World-Language of the future.[6] The history of this branch from the time of the earliest extant

[1] Both are nearly extinct.

[2] Still spoken by a few *lakhs* of people. The recent patriotic outburst in Ireland has given fresh strength to Erse.

[3] The most important of the Keltic languages, it also shows the chief features of this branch quite clearly. It is still spoken by about a million people and is zealously cultivated. Its oldest records go back to the 8th cent. A.D. Its best literature dates from A.D. 1000 to 1300.

[4] The last speaker of Cornish died in A.D. 1770.

[5] It is really a dialect of Cornish taken by the Cornish Britons as they emigrated to the north of France when hard pressed by Saxon invasions. The language is still spoken in some districts of north-western France.

[6] See Appendix D.

[1] Gothic is the earliest Germanic language of which we possess written records. The *Bible* of Bishop Ulfilas (Wulfila), A.D. 311-381, is the earliest Germanic document we possess. The language is much influenced in syntax by Greek, which was the language of the Orthodox Church to which Ulfilas belonged. The structure is, however, distinctly Germanic and almost entirely synthetical. It retains most of the nominal inflections and a very rich variety of verbal formations. It retains also the dual number. Among the languages of this branch Gothic approaches nearest to Sanskrit.

[2] "It is probable, but not provable, that the Norse (or Scandinavian) languages were carried into the northern peninsula partly in the eastern direction round the Gulfs of Finland and Bothnia and partly in the western through Denmark, as well as across the Baltic" (Tucker, op. cit., p. 214). The earliest Runic inscriptions of the 5th cent. A.D. show this type, though it is doubtful whether it can be called one language.

[3] Best preserved in the Icelandic *Eddas* (9th and 10th cent. A.D.) These are mythological and historical epics of great value. These epics, at first transmitted orally, were collected about the 12th cent. There are two such Eddas, one (the *Elder*) is in verse and the other (and younger one), also called the *Snorra-Edda*, is in prose.

[4] The term *High* German is used because these were originally the dialects of the highlands of south Germany and the Tyrol. Similarly the *Low* German dialects were spoken in the low-lying flat lands of north Germany.

[5] The three dialects named in the table are the principal ones known under the designation of Old High German. The literature extends from the 8th to 12th cent. A.D.

[6] It is chiefly the descendant of the earlier Swabian dialect. This dialect was the dialect of the Imperial Court under the Swabian House of Hohenstaufen. It has a splendid literature of lyric poetry and a great national epic, the *Niebelungenlied*. The language had lost a great many of the inflections by that period.

[7] Modern German might be dated from the time of Luther's translation of the Bible. The language, though it possesses a large proportion of loan-words, still retains a typically Germanic structure. In flexion it is much more elaborate than any Low-German language. Hence too its word order is more archaic than, say, in English. Phonetically too it is nearer the older Germanic type. Its most marked characteristics are its compound words and a large number of word-building suffixes.

[8] This dialect partakes of the character of both High and Low German dialects. It spreads from the Moselle up to Düsseldorf.

[9] The Frisian dialects are almost extinct in Germany at present. In a few districts in north-west of Germany and in Schleswig and some of the bordering islands these dialects still persist.

[10] Pronounce प्लाट्-दीश्च. This is the dialect of the whole of north Germany.

[11] The dialect in which most of the Anglo-Saxon or Old English literature has been preserved.

[12] See Chap. IV for further details.

## § 9 *The Italic branch*:

### (i) *Characteristics.*

The Italic branch is, like the Keltic, divided into *p*-Italic and *q*-Italic and for the same reason. Thus, I.-E. **penqne* gives Oscan *pumperias* and Lat. *quinque*. The *p*-group contains many of the languages of ancient Italy[1], which were replaced by the language of Rome at a very date[2]. The spread of Roman domination was the chief cause of the spread of Latin, the dialect of Rome. This constitutes the only known ancient language of *q*-Italic. The history of the spread of Latin in its various stages, Old Latin, Classical Latin and Neo-Latin, is closely bound up with the history of Rome. Even after the break up of the political Roman Empire Latin continued to exercise a profound influence on all the languages of Europe through the spiritual empire of Christendom as represented by the Roman Catholic Church. In the far flung political empire of Rome there grew up in course of time a common language, the *Lingua Romana*, which began to show dialectical and provincial differences even in the days of Roman supremacy. With the fall of Rome the *political* supremacy of Latin disappeared and in each of the Roman provinces the Lingua Romana developed differently in accordance with the different environments and conditions in each. Thus arose the great Romance languages of Europe, of which most have had a splendid literary and national history. Romance Philology has been studied in the West

[1] Among the non-Italic languages of ancient Italy are the Etruscan (Appendix A, § 29, i, a), Messapian (§ 13 below) and the dialects of the Greek colonists in Italy. The Ligurian is an unknown tongue.

[2] The Oscan survived in south Italy till the 1st cent. B.C. and even for some centuries later in the mountains.

most carefully and in the greatest detail, and many of the questions of linguistic development are clearly explained by the history of the development of the Romance tongues. The history of the development of these from Latin is in miniature the history of the development of the various branches from the I.-E. parent-speech.[1] The existence of cognate Italic dialects had considerably affected Latin grammar, notably in the phonetic portion. It is not easy to formulate a table of phonetic equivalents for Latin. Unfortunately the amount of knowledge we possess about the non-Latin dialects of the Italic branch is not enough to enable us accurately to judge in what degree Latin was altered by contact with them. Latin is far less rich in variety of inflection and of forms than Greek, but still the resemblances, in the synthetic stage, to other branches of I.-E. are very striking indeed. Classical Latin, however, was consciously full of Graecisms (especially in the syntax), because the Greeks had been the teachers of the Romans in the arts of culture and civilisation. The history of Latin also shows an advance from synthesis to analysis, which is well marked even before the Romance languages definitely branched out. Latin from the time of the earliest records has shown signs of a stress accent, which in course of time became more or less regular on the penult.

### (*ii*) *Divisions of Italic.*

The accompanying table shows the important Italic dialects.

[1] See Chap. IV.

## Italic Languages.

- **Italic branch**
  - Umbro-Samnitic (*p*-Italic)
    - Umbrian [1]
    - Oscan [2]
    - Sabine
    - Other dialects
  - Old Latin [3] (*q*-Italic)
    - Classical Latin [4]
    - Vulgar Latin [5] (or Neo Latin) — Lingua Romana [6]
      - Italian [7]
      - Spanish [8]
      - Portuguese [9]
      - Rhaeto-Romanic (Rhaetian) [10]
      - Roumanian [11]
      - Provençal [12] (Langue d'oc)
      - French [13] (Langue d'oïl)

[1] Known through seven large tablets, the *Eugubine Tablets* (probably about B.C. 200). These give about a thousand words and grammatical forms. At an early period Umbrian extended over most of northern Italy.

[2] This language was an important one in south Italy (see note 2, p. 136, above). There are about 200 inscriptions known, the most important of which is a bilingual tablet in Oscan and Latin.

[3] Known through inscriptions dating from the 5th to 3rd cent. B.C.

[4] Classical Latin has got a splendid literature dating from the 3rd cent. B.C. onwards extending over 400 years. The influence of the earlier writers and of Greek made the literary language of the later years very stilted and artificial. And this led to greater and greater divergence from the vulgar Latin which was spoken by the masses. Classical Latin is wholly synthetic in structure.

[5] Vulgar Latin (or Neo-Latin) was the language of the people of Italy in the days of the Empire. There were, of course, many dialects. These dialects bore to Classical Latin the nearly same relationship as the Prakrits did to Sanskrit. Neo-Latin is to be carefully distinguished from *Low-Latin* (also called *Dog-Latin*) which was a hybrid jargon invented in the middle ages by half-educated monks.

[6] The *Lingua Romana* was Vulgar Latin carried to other lands by the Roman legions and imposed upon the conquered people there. Naturally it underwent special changes in each land because the people and the circumstances in each were different. Hence the Lingua Romana, differentiated in this manner in each province, became the parent of the modern Romance languages.

[7] Literary Italian is a mixture of the Sicilian and the Tuscan dialects. Italian dialects have remained more or less independent of the literary language and each has produced its own literature.

[8] Spanish is the furthest removed from Latin of all the Romance languages. The non-I.-E. languages with which it came in contact were Basque (the language of the aboriginal Iberians) and in later ages Arabic (of the Moorish rulers). Moreover when the Visigoths conquered Spain, their Germanic tongue left very strong mark on Spanish. At the present time Spanish is practically the language of Central and South America, but that Spanish differs considerably from that spoken in Europe. In fact American Spanish represents an earlier stage (16th cent.) and has been considerably influenced by the aboriginal American languages.

[9] Galician though spoken in Spain is a dialect of Portuguese. A remarkable hybrid of Portuguese and Marathi is the Goanese dialect on the West coast of India (see Chap. XII).

[10] This is spoken in the mountainous region to the north-east of Italy. It has scanty literary remains.

[11] Roumanian is the easternmost of the Romance languages and has got a large admixture of foreign words, 40 per cent. being from Slavic and 25 per cent. through Turkish, Greek and other sources, while only 35 per cent. are pure Latin words. The article is *suffixed* as in Bulgarian, e.g. *omul*, the man (Lat. *homo ille*).

[12] The literary language of southern France in the 12th and 13th centuries. It is still spoken in the south-east corner of France and forms clearly a link between Italian and French.

[13] The non-I.-E. element in French has been well marked but in the absence of any knowledge of the Euskarian language (which was spoken by the Iberian aborigines) we are not able to give detailed information. The influence of Keltic and Germanic too has been very great. French as a separate language dates from the 9th cent. A.D. and the political importance of the language caused it to be a factor of prime importance in Europe, and, until quite recently, it was definitely accepted as the common language of cultured Europe.

## § 10. *The Greek (or Hellenic) branch:*

### (i) *Characteristics: Greek compared with Sanskrit.*

The geographical conditions of Greece, which divided it politically into a number of small states, also led to the formation of a great many dialects. Being descended from a common parent stock they necessarily had an outward semblance of unity, but the dialects of districts near the frontiers of the Hellenic world were so very different that the people of Greece refused to recognise their kinship. Thus even the Macedonian dialects were classed by them as barbarian. Different dialects have always existed in Greek and even in the Homeric epic there are distinct dialects traceable.[1] In its ancient form Greek is a very typical I.-E. language, and, after Sanskrit perhaps, possesses the most elaborate grammatical structure. The following are the important points to notice when Greek and Sanskrit (Vedic) are compared:

1. Greek has got its vowel-system closer to the I.-E. Ursprache and is exceedingly rich in dipthongal sounds. In Sanskrit the I.-E. consonants are better preserved.

2. Both languages show markedly the pitch or musical accent.

3. The noun and pronoun declension of Sanskrit is more elaborate, Greek shows only traces of some of the case forms like the instrumental and the locative.

4. In both the indeclinables (prepositions and adverbs) are very numerous, but these are not always identical.

5. In the verbal system:

[1] This Epic was put together at a later age and there are traces of the artificial joining and even a later attempt to produce uniformity of language quite clear to critical scholars.

(*a*) both have the *Parasmaipada* and the *Atmanepada*, [1]

(*b*) the tense systems and derived conjugations [2] are somewhat richer in Sanskrit, but

(*c*) participles, infinitives, gerunds and verbal nouns are much more elaborate in Greek.

6. The dual number is found in both languages.

7. There is the same facility in building up compounds in both languages; but in Greek the compounds have rarely attained the proportions of the Sanskrit compounds of the later classical age. [3]

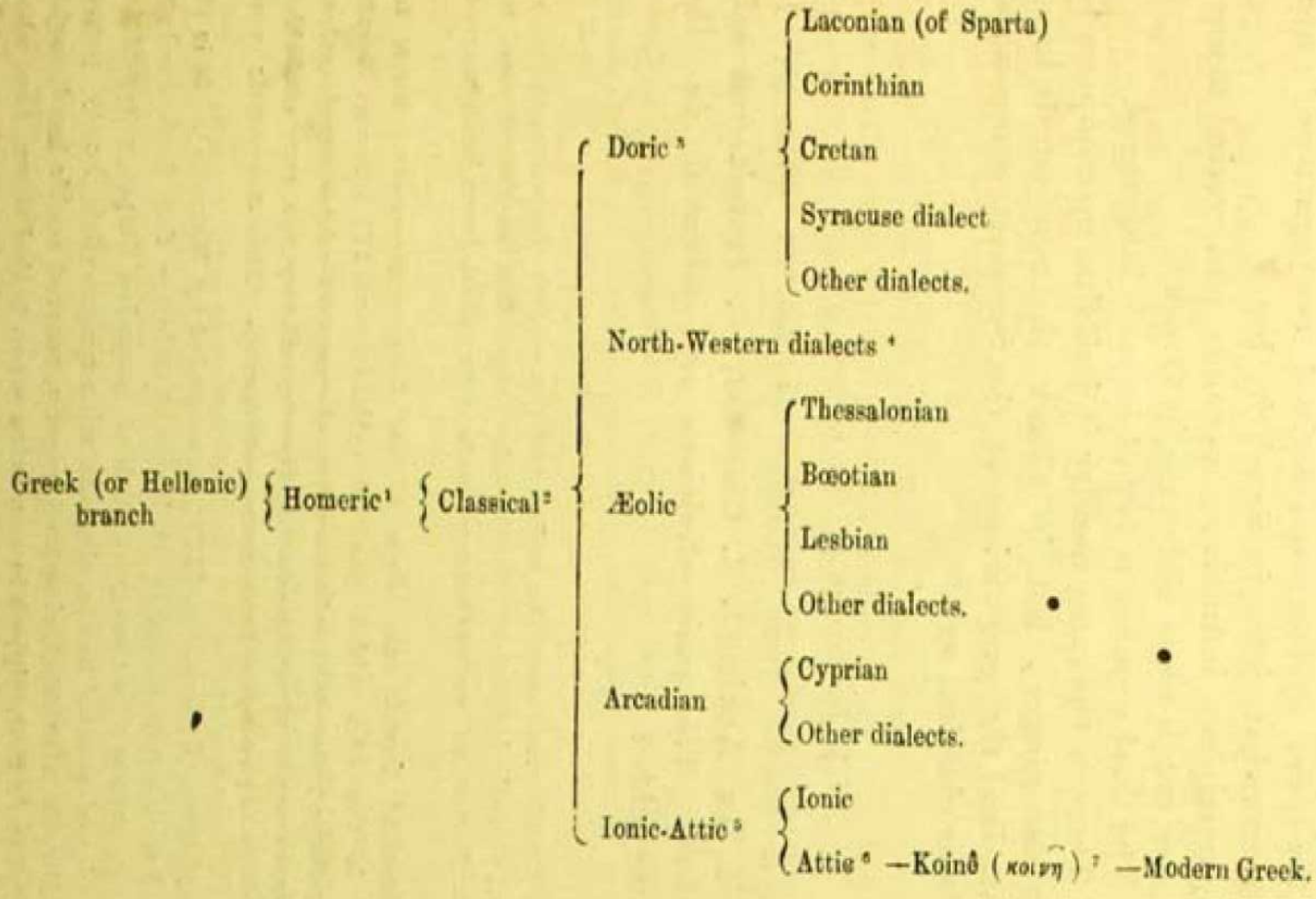
### (*ii*) *Divisions of the Greek branch.*

Greek shows four distinct stages of growth: 1. Homeric (or Ancient), 2. Classical, 3. Transitional and 4. Modern. The main divisions are indicated in the following table:

[1] In Greek grammars the *active* and the *middle voice* respectively.

[2] i.e., causal, intensive, desiderative, etc. But in Greek too we get such forms as καταπεπολεμησσμεθα (we shall have been warred-down).

[3] Classical Greek can show a few long compounds. Such for example is the one which has 78 syllables and 171 letters: λεπαδοτεμαχο-σελαχο-γαλεο-κρανιο-λειψανο-δριμ-υποτριμματο-σιλφιο-καραβο-μελιτοκατακεχυμενο-κιχλεπικοσσυφο-φαττο-περιστερ-αλεκτρυον-οπτο-κεφαλλιοκιγκλο-πελειο-λαγωο-σιραιο-βαφη-τραγανο-πτερυγων. This is a comic word in Aristophanes, *Ecclesousai*, 1169 (as emended by Meincke). It is the name of a dish compounded of all kinds of dainties, fish, flesh, fowl and sauces. It means "a pungent dish of pounded limpet, slices of salt fish and bits of sharks' heads, silphion with sea-crayfish, honey poured over it, thrush, blackbird, ringdove, pigeon, roasted cock's head, curlew and dove, hare's flesh dipped in new wine when boiled down, the whole edged with figs." But these are mere curiosities, rather monstrosities, of a language.


Greek (or Hellenic) branch
Homeric[1]
Classical[2]
Doric[3]
Laconian (of Sparta)
Corinthian
Cretan
Syracuse dialect
Other dialects.
North-Western dialects[4]
Æolic
Thessalonian
Bœotian
Lesbian
Other dialects.
Arcadian
Cyprian
Other dialects.
Ionic-Attic[5]
Ionic
Attic[6] —Koinê (κοινή)[7] —Modern Greek.

### (*iii*) *History of Post-Classical Greek.*

After the classical period, which ends with the loss of Athenian independence, the further development of Greek shows many points of interest. The "transitional stage" to Modern Greek shows four clear steps. One important feature found throughout its history is the tendency towards *Atticising*, i.e. reverting to the classical models of the great Attic writers of the past.[8] The following tables shows the development of the Attic dialect *historically*.[9]

[1] As already hinted above the Homeric represents a number of distinct dialects. The Homeric poems date at least from 1000 B.C., and presuppose a long previous growth of language and literature.

[2] Many of the dialects of classical Greek are known only in inscriptions. As literature grows there is a distinct movement towards standardising the language.

[3] The Doric dialects are perhaps among the earliest of the Greek branch. The Dorians destroyed the great civilisation of ancient Crete. The *Cretan* dialect mentioned in the table is not the language of this ancient civilisation but a dialect of the Doric conquerors.

[4] These are often grouped erroneously with the Æolic.

[5] Attic forms the basis of what is called Classical Greek. It became the standard literary language. The Ionic-Attic group is broadly divided from the Doric (and Æolic) by the fact that while the latter preserves the I.-E. *ā-sound the former changes it to ē (η), thus I.-E. **māter* gives Doric μα'τηρ but Attic μη'τηρ.

[6] Classical Attic shows two stages of growth: Old Attic of the Histories and the Drama (B.C. 500—400) and New Attic of Plato and Demosthenes (B.C. 400—300).

[7] Attic became definitely the common standard language of all Greece after the Macedonian conquest. And thenceforth it was known as 'η κοινὴ δια'λεκτος (the common or conventional language). From this modern Greek is derived.

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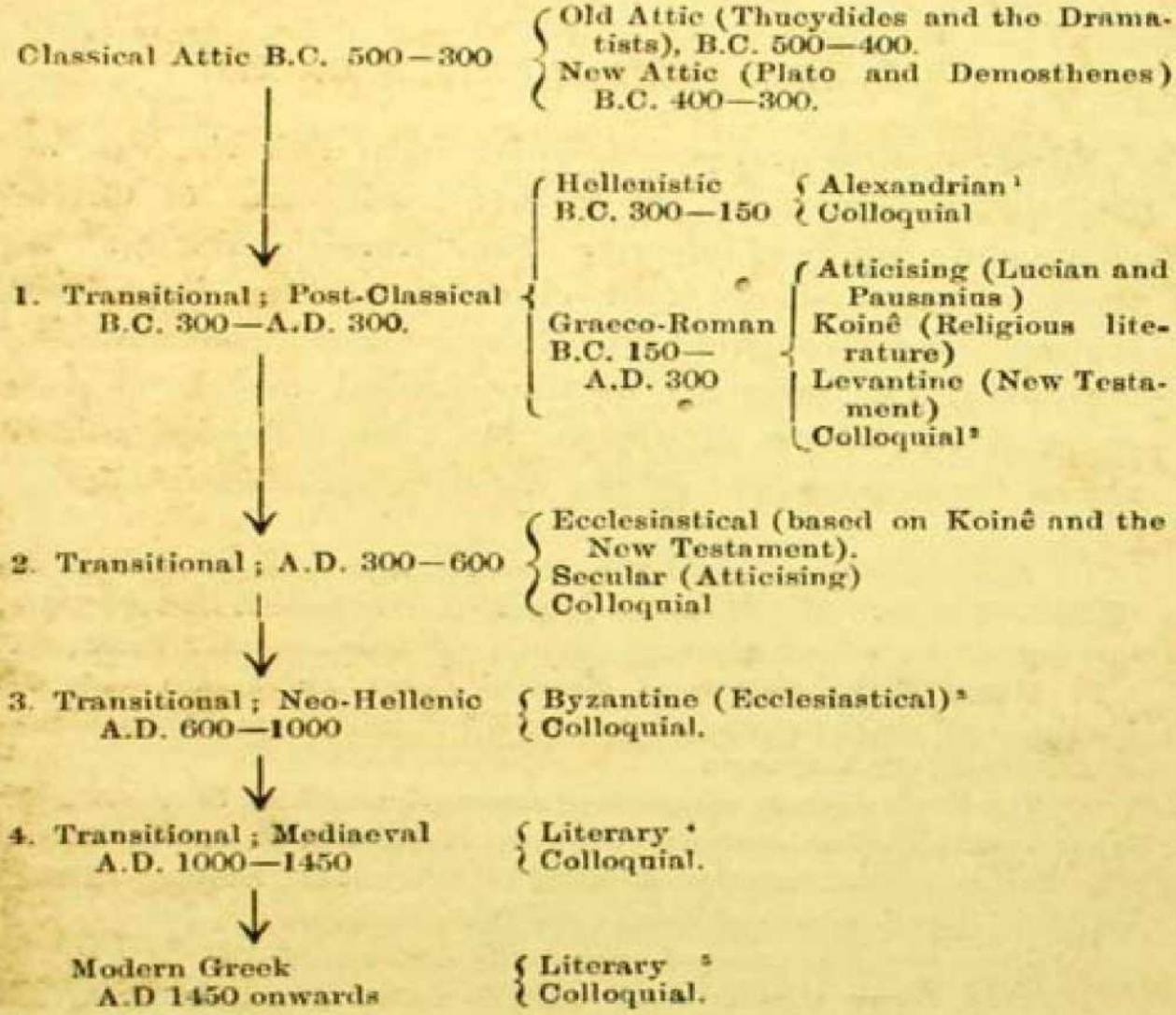
[8] A similar tendency to *Sanskritising* may be noted all through the history of Indian languages.

[9] Adapted from J. M. Edwards, *An Introduction to Comparative Philology*, pp. 99 ff.




It will be noted that in this branch we do not have an extensive spreading out of the language as with Latin. Of course, there are many survivals of the old dialects, but we have considered only the standard language at various

[1] Influenced by Hebrew and Egyptian elements.

[2] This has been preserved in some Papyri.

[3] Based on the Ecclesiastical and the Secular of the previous period.

[4] This is a development of the *colloquial* of the previous period; for the first time in the history of the transition period we find the colloquial becoming a literary language.

[5] The Atticising tendency has begun again since Greece became independent in A.D. 1824.

periods of its history. Modern Greek differs from the Classical Attic in the following important respects :

1. Certain vowels and dipthongs have become uniform in pronunciation and have thus merged together.

2. The consonants, too, have changed considerably in their sounds. Thus the aspirates χ, θ, φ have become spirants.[1] So also δ has become a spirant like *th* in *then*.

3. The vowel-length is ignored.

4. The pitch accent is replaced by a very strong stress.[2] This has led to a considerable phonetic breaking up.

5. Cases have become confused and are replaced mostly by prepositions.

6. In verbs auxiliaries have largely taken the place of flexion.

7. Many new words have been coined, and loan words have been imported in considerable numbers.[3]

## § 11. *The Hittite branch.*

In recent years excavations at Boghaz-küi in Asia Minor have resulted in the discovery of a large number of inscriptions in cuneiform writing belonging to the Hittites.[4] Till about a fifty years ago we knew little of these people beyond their name. But the

[1] In ancient Greek these were almost exactly equal in value to Skt. ख्, थ्, फ्, respectively. In modern Greek these have the value of *ch* in *loch*, *th* in *thing*, and the English *f*.

[2] The effect on ears unused to this accent is almost painful.

[3] It would be instructive to work out a parallel between the history of the development of Modern Greek and that of the Modern Indo-Aryan Vernaculars of India.

[4] A very readable paper, by Prof. S. J. Crawford, of Madras Christian College, on the recent investigations on the Hittite question, has appeared in the *J.R.A.S.*, 1919, entitled "The Decipherment of the Hittite Language."

Tel-el-Amarna tablets discovered in 1888 threw valuable light on the Hittite kingdom of the 14th and 15th cent. B. C. Linguistically there are two distinct opinions about the Hittites. Prof. Sayce very strongly holds the view that their language is of the Semitic stock largely influenced by I.-E. The other view is that of Prof. Hrozny who definitely regards this as an I -E. tongue though largely modified by Semitic elements. The language presents to us the earliest known instance of the mutual influence of the Semitic and I.-E. families of speech. Hrozny enumerates the following important points which tend to prove his statement.

1. The present participle nom. sg. mas. ends in *-an* and the plural ends in *-antes*, thus *da-a-an*,[1] giving plu. *da-an-te-es ;* cf. Skt. गच्छन्, गच्छन्त: ; Lat. *ferens, ferentis.* Not only is the correspondence noticeable in the nom. but in all cases.

2. The scheme of noun declension corresponds on the whole to that of the I.-E., but Hittite shows six cases out of the original seven.

3. The pronouns too show a very marked resemblance. To illustrate this the following list in parallel columns will be instructive :

| | |
|---|---|
| Hit. *uga* (I) | I.-E. Lat. *ego* |
| *tat* (it) | Skt. तत् |
| *kuis* (which) | Lat. *quis* |
| *kuid* (what) | „ *vuid* |
| *kuis kuis* (whoever) | „ *quisquis* |
| *kuiskui* (anyone) | „ *quisque* |

4. The parallelism in verbs is equally striking. Thus :

| | |
|---|---|
| Hit. 1. sg. *i-ia-mi* (I make) | I.-E. Skt. यामि (I go) |
| 2. „ *i-ia-si* | यासि |
| 3. „ *i-ia-zi* | याति |

[1] This mode of spelling is due to the cuneiform syllabic writing.

| | | |
|---|---|---|
| 1. plu. | *i-ia-u-e-ni* | यामः |
| 2. ,, | *i-ia-at-te-ni* | याथ, याथन [1] |
| 3. ,, | *i-ia-an-zi* | यान्ति |

5. The indeclinable particles are also remarkably similar.

The Hittite language belongs to the *centum*-group; Latin seems to be very closely placed to the Hittite. In fact its geographical position makes it probable that this language occupies a central position among the I.-E. family, and Hrozny thinks that Tokharish is the nearest relative of Hittite and that the latter "bridges the gulf between the westernly *centum*-languages and Tocharian."[2]

## § 12. *The Tokharish branch.*

This branch has been added as a result of the German expedition to Turfan in Central Asia early in the present century. A large number of manuscripts in an ancient Indian alphabet[3] were discovered and these being deciphered revealed a new language of the I.-E. family and belonging to the *centum*-group. This has now been satisfactorily studied and we now possess a fair knowledge of the structure of the language.[4] The resemblance to I.-E. languages is not so absolutely apparent as to be

[1] Whitney, *Sanskrit Grammar*, § 549a.

[2] *J.R.A.S.*, 1919, loc. cit.

[3] Technically called the "Central Asian Slanting." See *J.A.S.B.*, 1901, Pt. 2, extra number 1, pp. 11 f.

[4] A very good summary account of this is given by Dr. E. Sieg and Dr. W. Siegling of Berlin in their paper entitled *Tocharisch, die Sprache der Indoskythen* (1908). This has been separately printed as a pamphlet in the *Sitzungsberichte der berliner Akademie der Wissenschaften.*

striking at first glance. There seems to have been a great deal of influence from one of the Ural-Altaic languages. The chief peculiarities may be enumerated as follows :

1. The vowels seem to have become simplified and quantity seems to have been neglected. The consonants are very much simplified as compared with Sanskrit.

2. *Sandhi* is observed, but not so regularly as in Sanskrit, and between a final vowel and the initial vowel of the following word a hiatus is allowed more often than not.

3. The declension of nouns shows an agglutinating type, i.e. the plural-suffix is added on first and then the case-suffix, which latter is the same for both numbers.

4. There are eight cases in the singular of which two are special developments.[1] The plural has nine forms, the additional one being the Partitive Genitive.

5. The pronouns are distinctly I.-E. in form.

6. The numerals are also distinctly I.-E.

7. The verbal system is rather complex and participial forms are very well developed.

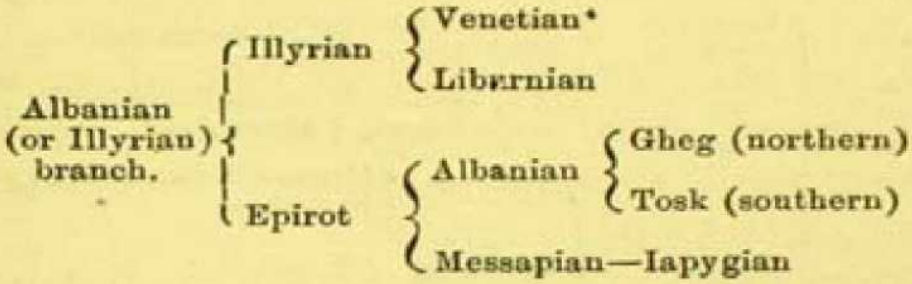
This language was used by the people known to the Greeks by the name Tokharians (τοχαροι), who were a part of the Indo-Skythian race and who founded a powerful kingdom in Central Asia after the fall of the Graeco-Bactrian rulers in the 2nd cent. B.C.

### § 13. *The Albanian (or Illyrian) branch.*

Albanian is the sole remnant of a once extensive branch, the Illyrian. It presents special difficulties for studying as there are no literary monuments except a

[1] A Commitative (सह-)case and a Reason-case.

number of inscriptions.[1] The language has been much influenced by Slavic[2] and there is also a considerable proportion of Turkish admixture. At first it was not recognised as being a separate branch but the structure and phonetics are distinct enough from the other branches. The main divisions are given in the following table :[3]




## § 14. *The Letto-Slavic (Balto-Slavic) branch.*

The Lettic (or Baltic) group is represented by three languages, of which one (Old Prussian) is extinct. Of the remaining two, Lithuanian and Lettic, the former is specially important because among the *living* I.-E. languages, it represents the most archaic type. Among other things it preserves the ancient pitch or musical accent, which was used in Vedic Sanskrit and in ancient Greek. The Slavic group is far more extensive[5] and has

[1] A large number of the so-called Albanian inscriptions are now known to have been forgeries, made by ignorant peasants, because they knew that inscribed stones fetched money.

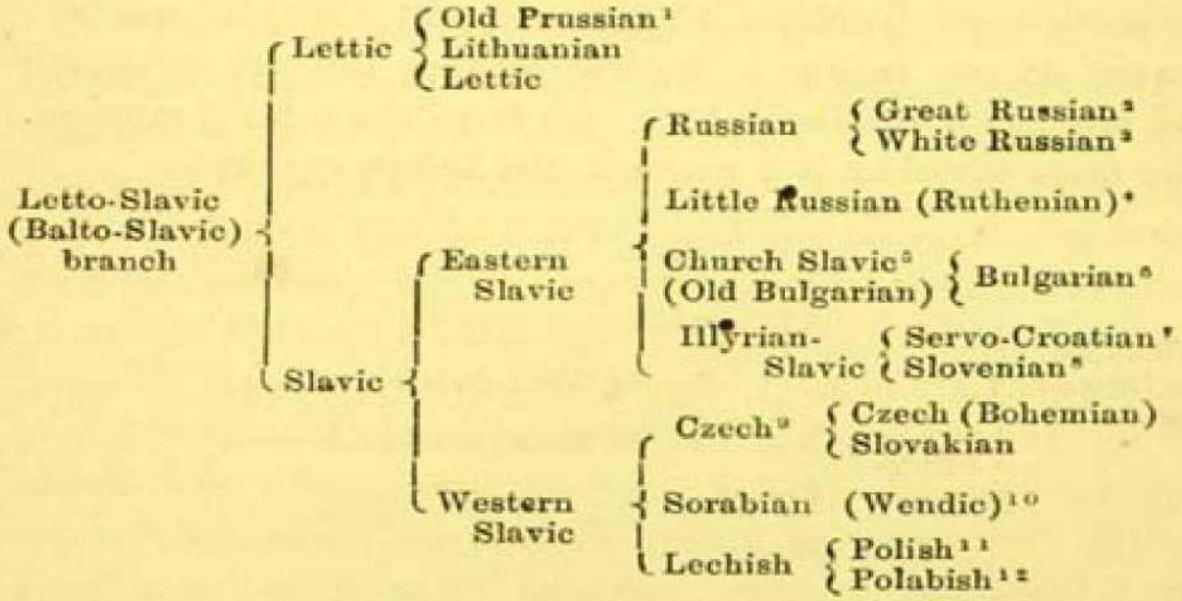
[2] e. g. the suffixed definite article as with Roumanian (see note 11 p. 139 above).

[3] Tucker, op. cit., p. 196.

[4] The Language of the people known as the Veneti.

[5] Until the 9th century the Slav races occupied most of Germany and Austria and Slavic languages were spoken as far as the Elbe even up to the 14th Cent.

developed in special directions. The main divisions are as given in the following table:




[1] Known through a German-Prussian glossary and three catechisms. It became extinct in the 17th century.

[2] The Literary Russian. Its literary records go back to the 11th cent., but it became the standard language only from the 18th.

[3] Comprising the dialects of Western Russia.

[4] The dialects of Southern Russia are included in this group.

[5] Church Slavic is the language in which the oldest records of the Slavic were written in the 9th cent. A.D. by Cyril and Methodius. The name merely indicates the nature of the literature embodied in it. The language is the oldest form of Slavic and comes nearest in structure to Sanskrit and Greek.

[6] Modern Bulgarian is the furthest removed of all Slavic languages from the typical Slavic. It is almost completely analytic and the vocabulary is very mixed, possessing Turkish, Greek, Roumanian and Albanian elements (Tucker, op. cit., p. 224).

[7] This represents the dialects of the new state of Jugo-Slavia. These form a very important branch of the Slavic and have records going back to the 12th cent.

[8] It has records dating from the 10th cent. It is spoken along the eastern shores of the Adriatic in the southern portions of modern Jugo-Slavia.

[9] Comprising the languages of the new state of Czecho-Slovakia. The Czech has been chiefly developed during the last century, though the earliest document goes back to the 13th cent. Slovakian is a mere dialect variety of Czech.

[10] Gradually becoming extinct. It has only about a lakh of speakers and is confined to Prussia. The Wends were probably the earliest Slav people.

[11] A well developed literary language. The earliest work is dated A.D. 1290.

[12] Once spoken on the lower Elbe; now entirely extinct.

## § 15. *The Armenian branch.*

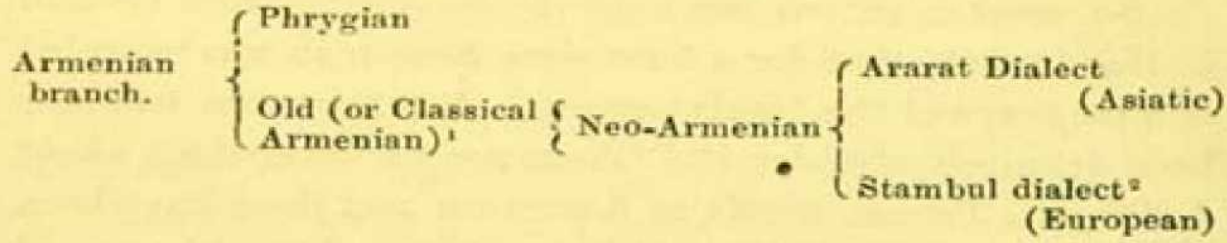
So great in extent has been the borrowing from Persian in this branch, that for a long time Armenian was regarded as a language of the Iranian group. But this view has now been definitely abandoned. There are no fewer than about 2,000 pure Persian words in Armenian and these have been borrowed at all periods of history.[1] The whole history of Armenia has been intimately connected with that of Persia, and until A.D. 428 the throne of Armenia was occupied by a younger branch of the royal house of Persia. "Kings and nobles had Persian names, Persian also were words used in connection with houses and chase; war and army; dress, trade and coinage; calendar, weights and measures; court and political institutions; music, medicine, school, education, literature and the arts. Many of the everyday words were also Persian in origin, ... The language of the old religion too was mainly Persian."[2] Several Persian prefixes and suffixes were also adopted; the main structure, however, excluding the Persian borrowing is purely Armenian and quite distinct from the Persian or any other I.-E. language. Armenian probably represents a link between the Letto-Slavic and the Aryan branches. The language is essentially I.-E. of the शतम्-type. Armenian has also been very considerably influenced by non-I.-E. languages. The influence of Caucasian languages is well marked in many cases. The Semitic family too has influenced Armenian, first through Syriac, and later through Arabic. The ancient Phrygian was probably a connected idiom.[3] There are two main dialects, each with its own phonetic

[1] In many cases the same word has been borrowed twice, at an earlier and at a later period.

[2] *Ency. Brit.*, art. "Armenian language."

[3] Herodotus mentions a tradition to this effect.

peculiarities but recognisable as akin in their grammatical structure. The divisions may be given as follows :




## § 16. *The Āryan (Indo-Iranian) branch.*

The name Āryan is now definitely confined to that group of languages, the speakers of which in ancient times called themselves *Āryas*. It consists of languages which go back to a hoary antiquity and possess literary records older than those of any other I.-E. tongue. The two groups into which the Āryan branch is divided are the most closely connected among the I.-E. languages. The history of the separation of the Āryan languages from the parent stock is not at all clear, but the Hittite inscriptions and Tokharish, when properly studied, would, it is believed, lead to clearer ideas on the subject.[3]

### (*i*) *Characteristics.*

The Aryan languages make a very closely connected group, sharply marked out from the other I.-E. languages. The chief grammatical peculiarities which distinguish this branch from others are :

[1] The oldest records are the cuneiform inscriptions from Van. The Old Armenian Literature (mainly Christian) extends up to the 11th cent. It is still cultivated by the learned for ecclesiastical purposes.

[2] Used in Constantinople and along the Black Sea coast.

[3] Hittite inscriptions mention the early Aryan gods—Varuna, Indra and the Nāsatyas.

1. The I.-E. **a*, **e* and **o* (short or long) all fall together in Aryan as *a* (short or long) (Skt. अ or आ). For example ;

| | | | | |
|---|---|---|---|---|
| I.-E. | **ékwos*[1] | Lat. *equus* | Skt. अश्व: | Av. *aspō* |
| | **nébhos* | Lat. *nebula*; Grk. *νέφος* | नभस् | *nabah* |
| | **ósth* | Lat. *os*; Grk. *'οστέον* | अस्थि | *asti* |
| | **róthos* | Lat. *rota* | रथ: | *raθō* |
| | **apó* | Grk. *'από* | अप | *apa* |
| | **yág* | Grk. *ἄζομαι* | यज | *yaz* |

2. The I.-E. **ə*[2] becomes *i* (इ) in Aryan. For example :

| | | | | |
|---|---|---|---|---|
| I.-E. | **pəté* | Lat. *pater*; Grk. *πατήρ* | Skt. पिता | Av. *pitā* |
| | **bhérətrom* | ,, *φέρετρον* | भरित्रम् | |

3. The *r* and *l* sounds (and with these the corresponding vowels *ṛ* and *ḷ*) are confused in Aryan.[3] For instance :

| | | | | |
|---|---|---|---|---|
| I.-E. | ** wḷke* | Lat. *lupus*; Grk. *λύκε* | Skt. वृक: | Av. *vəhrkō*[4] |
| | ** léighmi* | Lat. *lingo*; Grk. *λείχω* | रेढ्मि (Vedic)[5] | |
| | ** ru'nc* | Lat. *runcare*; Grk. *ὀρύσσω* | लुनामि[6] | |

[1] Note that *w* is a consonant pronounced like the English *w*.

[2] This letter *ə* called *Schwa* by Western philologists is really a very short "neutral" vowel. The closest sound in Sanskrit would be an अ pronounced in an interval of half a *mātrā*. I therefore propose to call it अर्धमात्रा. This I.-E. sound had varied developments in the other languages of this family.

[3] रलयोरभेद: ।

[4] In the transliteration of Av. the *ə* stands for a short *e*-sound almost like the এ in Ben. একা.

[5] Classical लेढ्मि.

[6] Examples of Skt ल् (or ळ) going back to I.-E. **ṛ* (or *r*) are rare; Lat. *corpus* is congnate with Skt. क्रूप्.

4. I.-E. **s* becomes *ś* in Aryan after *i*, *u*, liquids, *s* or *k*: this changes further to ष् in Skt. For instance:

| | | | |
|---|---|---|---|
| Lat. *sisto*<br>Grk. ἵστημι | Skt. | तिष्ठामि | Av. *hištaiti* |
| Lat. *gustus* | | जोष्टृ | *zaošo* |
| ,, *vox* | | वक्ष्यति | *vakšaiti* |

5. In the declension of vowel-stems the gen. plu. ending is =नाम्.

6. The imperative 3rd per. sg. ends in =तु.

These six main characteristics and many other grammatical pecularities are common to Indian and the Iranian languages as is very apparent when passages of Sanskrit (notably Vedic) and Avesta and Old Persian are compared. [1]

### (*ii*) *Divisions of the Āryan branch.*

The two main divisions of the Áryan are Iranian and Indian. The former had developed fairly early an extensive religious literature of which the greater portion was lost at the time when Persepolis was burnt by Alexander the Great, B. C. 323. This loss was partially made good five centuries later under the rule of the Sassanians, but what was then restored was once again destroyed except for a few books (and fragments of a few others) after Persia was conquered by the Arabs in A.D 651. These remnants are preserved as the *Avesta*[2] or the Sacred Books of the Zoroastrians. The other remnants of ancient Iranian dialects are found in a splendid set of inscriptions

[1] See below § 18.

[2] The name *Avesta* seems to have meant "scriptures" and comes from a root cognate with Skt. √वस् with the *upasarga* अभि. This name is now applied to the language in preference to the older names Zend or Old Bactrian.

dating from the time of Kurush[1] (B. C. 558-530), the founder of the Hakhmānian (Achæmenian) dynasty. The most famous of these inscriptions, as well as the most extensive and best preserved, is the great Inscription of Darius (B. C. 522-486) on the Behistun Rock. This dialect is known generally as Old Persian. The oldest records of the Indian branch are the Vedas which represent perhaps the oldest literature of the Indo-European family.

### § 17. *The chief distinguishing characteristics of the Iranian group.*

The Iranian group developed along certain lines different from the Indian, but the resemblances between these two, especially in the earlier stages, are so great, that a mere phonetic change often suffices to *translate* a passage from the one into the other. And not only is such a translation accurate phonetically, but it also reproduces in a large measure the *spirit* of the original. The main points of difference between these two groups (as represented mainly by Avesta and Sanskrit) are as follows.

1. The length of vowels does not always correspond accurately. This non-correspondence is quite irregular.[2] The older Gā*θ*ā dialect is marked by the fact that all final vowels are long, whereas in the later stages of the language they are all short (except *ō*). Examples :

| | | | |
|---|---|---|---|
| Skt. पथ | G. A. *aθā*, | Y. A. *aθa*. |
| पुरा (nom. du.)[3] | *puθrā* | *puθra* |
| रत्नम् | *ratūm* | *ratūm* |

[1] Usually spelt *Cyrus* but I have preferred to spell the name in a way which would indicate more closely the ancient pronunciation.

[2] Except in the accusative sg. of nouns in *i* and *u* where the vowel is invariably long in the Av. ; see Jackson, *Avesta Grammar*, § 23.

[3] A Vedic form ; see Whitney, *Sanskrit Grammar*, § 330 6.

2. There is a special development in Av. of several *e*- and *o*-sounds, represented phonetically by *ə*, *ə̄*; *e*, *ē* and *o*, *ō*. These are often used in place of अ or आ of Sanskrit and they also undergo special modifications in combinations of र and उ, with य् and व्.[1] In O. Pers. these are not found. Example:

सन्ति, Av. *hənti*, O. Pers. *hantiy*.

3. The diphthong *å̄* (pronounced आओ) represents Skt. आस् and sometimes आन्.[2] Examples:

| | |
|---|---|
| Skt. दैवास: | Av. *daēvå̄nghō* |
| महान्तम् | *mazå̄n̲təm*. |

4. The Av. has developed a large number of vowel combinations, in which each constituent vowel has to be separately pronounced. Thus, we get the Skt. diphthongs ए and ओ represented by *aē* and *aō* and ऐ and औ by *āi* and *āu*.

5. There is a tendency in Av. to introduce redundant vowels, especially prothetic and epenthetic vowels in the body of a word.[3] Examples:

| | |
|---|---|
| Skt. रिणक्ति | Av. *'rinaχti* |
| अक्षेभ्य: | *aspaē'byō* |
| भरति | *bara'ti* |

6. The treatment of the र is peculiar in Av. It is generally represented by *ərə*,[4] sometimes as *arə*. A very peculiar phonetic equation is ऋत=*aṣa* (अष).[5]

7. The Old Persian vowel system is much more simple than in Avesta, due partly, doubtless, to the limitations of the cuneiform script adapted from the Semitic Assyrian.

[1] Jackson, op. cit., §§ 27, ff.

[2] Ibid, §§ 43-44.

[3] See below, chap. IX.

[4] In many cases it has to be pronounced as र.

[5] See my article on "Ṛsi" in *Sir Asutosh Mookerjee Silver Jubilee Volumes* (*Orientalia*).

8. The voiceless unaspirates ( क्, त्, प् ) become affricates[1] ( $\chi$ $\theta$, $f$ ) in Av. when conjoined to other consonants. Sometimes the Av. $\chi$, $\theta$, $f$ represent the voiceless aspirates ख्, थ्, फ्. Examples :

| | | | |
|---|---|---|---|
| Skt. | क्रतुः | Av. | *χratuś* |
| | सत्यः | | *haiθyō* |
| | स्वप्नम् | | *χ$^v$afnəm* |
| | सखा | | *haχa* |
| | गाथा | | *gāθā* |
| | कफम् | | *kafəm.* |

9. The voiced aspirates ( घ्, ध्, भ् ) are often represented in Y. A. (and *always* in G. A.) by the corresponding unaspirates (*g*, *d*, *b*). In Y.A. we sometimes get the voiced affricates $\gamma$, $\delta$, *w* also. Examples :

| | | | |
|---|---|---|---|
| Skt. | जङ्घा | Av. | *zanga* |
| | धारयत् | | *dārayat* |
| | भूमि | | *būmi* |
| | दीर्घः | | *darəγō* |
| | अध्वानम् | | *aδwanəm* |
| | अधम् | | *awrəm* |

10. The initial स् becomes *h* in Iranian. Examples :

| | | | |
|---|---|---|---|
| Skt. | सिन्धु | Av. | *hindu* |
| | सर्व | | *haurva* |
| | सकृत् | | *hakərəṭ* |

11. The combinations अस and आस् have a complex development in Av., when initial or medial the gutteral nasal *ng* being generally inserted. Examples :

| | | | |
|---|---|---|---|
| Skt. | वंसनम् | Av. | *vanghanəm* |
| | असु | | *ahu* or *anghu* |
| | मासम् | | *māŋghəm* |
| | पासि | | *pāhi* |

[1] See chap. IX for an explanation of these terms. True aspirates are unknown in Av.

12. अस् and आस् final (i.e. अः and आः) become *ō* and *ā̊* in Av. Examples :

| Skt. | | Av. | |
|---|---|---|---|
| असुरः | | *Ahurō* | |
| इषवः | | *isavō* | |
| गाथाः | | *gāθā̊* | |
| सेनायाः | | *haēnayā̊* | |

13. The voiced sibilants *ž* and *ź*[1] are special developments in Iranian. In old Pers. the *ž* often changes to *d*. Examples :

| Skt. | | Av. | | |
|---|---|---|---|---|
| हस्तः | | *zastō* | (O. Pers. | *dast*) |
| अहम् | | *ažəm* | ( ,, ,, | *adam*) |
| अहिः | | *aźiš* | | |
| दहति | | *dazaiti*. | | |

14. Of the various "classes" of consonants in Skt., the gutterals, dentals and labials are represented in Av. fully, but of the palatals Av. has only *c* and *j*, while the cerebrals are entirely wanting.

15. The nasals are five in number in Av. as in Skt. but only *ng* (ङ्), *n* (न्) and *m* (म्) correspond.

16. ल् is entirely absent. The same is the case also in the *earliest* Veda.

17. The accent in Avesta is a strong stress and this accounts for a great many of the peculiarities, such as the dropping of vowels and it also affects the metre. The Sanskrit accent is a pitch or musical accent.[2]

18. In declensions the *-āṯ* termination of abl. sg., which in Skt. belongs to अ-nouns only is extended in Av. to all nouns. Examples :

| | |
|---|---|
| *χšaθrāṯ* | (from *χšaθra*, क्षत्र) |
| *vīsaṯ* | (from *vīs*, विश्) |
| *tbišyanṯaṯ* | (from *tbišyanṯ*, त्विष्यन्त्) |

[1] Pronounced like *z* in *azure*.

[2] See below Chapter X.

19. Periphrastic forms, which in Skt. are mostly later developments, are almost entirely unknown in Av. And the three or four that are found are not paralleled in Sanskrit.[1]

## § 18. *The closeness of Iranian and Indian groups.*

### (a) *Avesta and Sanskrit.*

In order to illustrate the extreme closeness between these two groups composing the Aryan branch it would be best to take an Avesta passage and translate it word for word into Sanskrit. I would therefore give here the first verse of Yasna IX[2] which is in a metre corresponding to the अनुष्टुप् (i.e., eight syllables to the *pāda*) and it will be seen that the metre also comes right if we make due allowance for the differences of accentuation.

Avesta text :—

*hāvanīm ā ratūm ā*
*Haomō upāiṯ Zaraθuštrəm,*
*Ātrəm pairi-yaoźdaθəṉtəm,*
*Gāθās-ca srāvayaṉtəm.*
*ā-dim pərəsaṯ (Zaraθuštrō)*[3] : *kō, narə, aŋhi*
*yim azəm vīspaŋhe aŋhəuš*
*astvatō sraēštəm dādarəsa.*

[1] Jackson, op. cit., §§ 623 and 722-724.

[2] See "-A Sanskrit Version of Yasna IX" in *Sir Asutosh Mookerjee Silver Jubilee Volumes (Orientalia).*

[3] The brackets imply that the word is a later addition which does not quite fit in with the metre.

Sanskrit version : [1]

सवनिम् आ ऋतुम् आ
सोमो उपेत् जरथुष्टम्।
अतिम् *परि-यीस्-दधत्तम्
गाथाश्च [अपि][2] श्रावयन्तम्॥
आ तम् पृच्छत् (जरथुष्टः) को नः असि
यम् अहम् विश्वस्य असोः।
* अस्थिवतः श्रेष्ठम् ददर्श॥

Translation :

At the hour of early morning Haoma came up to Zara$\theta$uśtra who was cleaning all round the fire (-altar), and was chanting the Gā$\theta$ās. Unto him asked Zara$\theta$uśtra, "Who, O Hero, art thou, whom I see the noblest of all material creation."

(*b*) *Old Persian and Sanskrit.*

A similar instance may be given from Old Persian. But here some words are strange in Sanskrit. I have indicated these by enclosing them in brackets. This passage is from the Inscription of Darius at Naksh-i Rustam.

Old Persian text :

*Baga vazarka Auramazda, hya imām būmim adā, hya avam asmānam adā, hya martiyam adā, hya siyātīm adā martiyahyā, hya Dārayavaum xšāyaθiyam akunauš, aivam paruvanām xšāyaθiyam, aivam paruvanām framātaram.*

[1] For full explanation of the special words and forms see the article mentioned in footnote 2, p. 159. The words preceded by an asterisk (*) are "coined" or are used in a special sense.

[2] Metre requires an अपि to be added here for पादपूर्ति.

[3] It will be noted that except the "coined" forms all the words are found in the Veda in the sense used here, and even for these "coined" words there are Vedic forms which are fairly close or cognate. Thus, अपि is a name for fire in RV., II. 8. 5, as explained by Sāyaṇa.

*adam Dārayavauś χšāyaθiya vazarka, χšāyaθiya χšāyaθiyānām, χšāyaθiya dahyūnām vīspazanānām, χšāyaθiya ahyāyā būmiyā vazarkāyā dūrai apiy : Vištāspahyā puθra, Haxāmanišiya, Pārsa Pāsahyā puθra, Ariya Ariya-ciθra.*

*Sanskrit version :*

भगः बुजुर्गः[1] अहुरमज्दः, यः इमाम भूमिम् अधात्,[2] यः अवम्[3] अस्मानम्[4] अधात्, यः मर्त्यम् अधात्, यः शादिम्[5] अधात् मर्त्यस्य, यः धारयद्दसुम् चयन्तम्[6] अकृणोत्, एकम् पुरुषाम् चयन्तम्, एकम् पुरुषाम् प्रमातरम्[7] ।

अहम् धारयद्दसुः चयान् बुजुर्गः, चयान् चयताम्, चयान् दस्यूनाम्[8] विश्वजनानाम्, चयान् अस्याः भूम्याः दूरे अपि, वीस्तास्पस्य पुवः, हखामनिश्चीयः, पार्सः पार्सस्य पुवः, आर्यः आर्यचित्रः[9] ”

[1] The word *vazarka* has given the Mod. Pers. *buzurg* (great). have merely transcribed the Persian word here (as also the name *Ahuramazda*) as there is no Sanskrit word corresponding. The word has come into our vernaculars.

[2] The final त् drops out in the Cuneiform as there is no pure consonant in that script.

[3] The pronominal stem *ava* is found in R.V. in the gen. loc. du. अवोः ।

[4] Cf. *āsmān* (sky) in our vernaculars.

[5] Here again I have put in the Mod. Pers. word *šādī* (rejoicing). In the vernaculars it is used for the special occasion of “ marriage.”

[6] From चि (to rule) This root is found in the name परिचित् ।

[7] प्रमति (fem.) is found in the sense of “ protector ” in the Veda.

[8] दस्यु here means “ country.” In the Veda the word is used for a people.

[9] चित्र is used in the Iranian sense of “ lineage ” or “ progeny.”

*Translation.*

A great God (is) Ahura Mazda, who created this earth, who created yonder heaven, who created man, who created happiness for man, who made Darius king, one king of many, one lord of many.

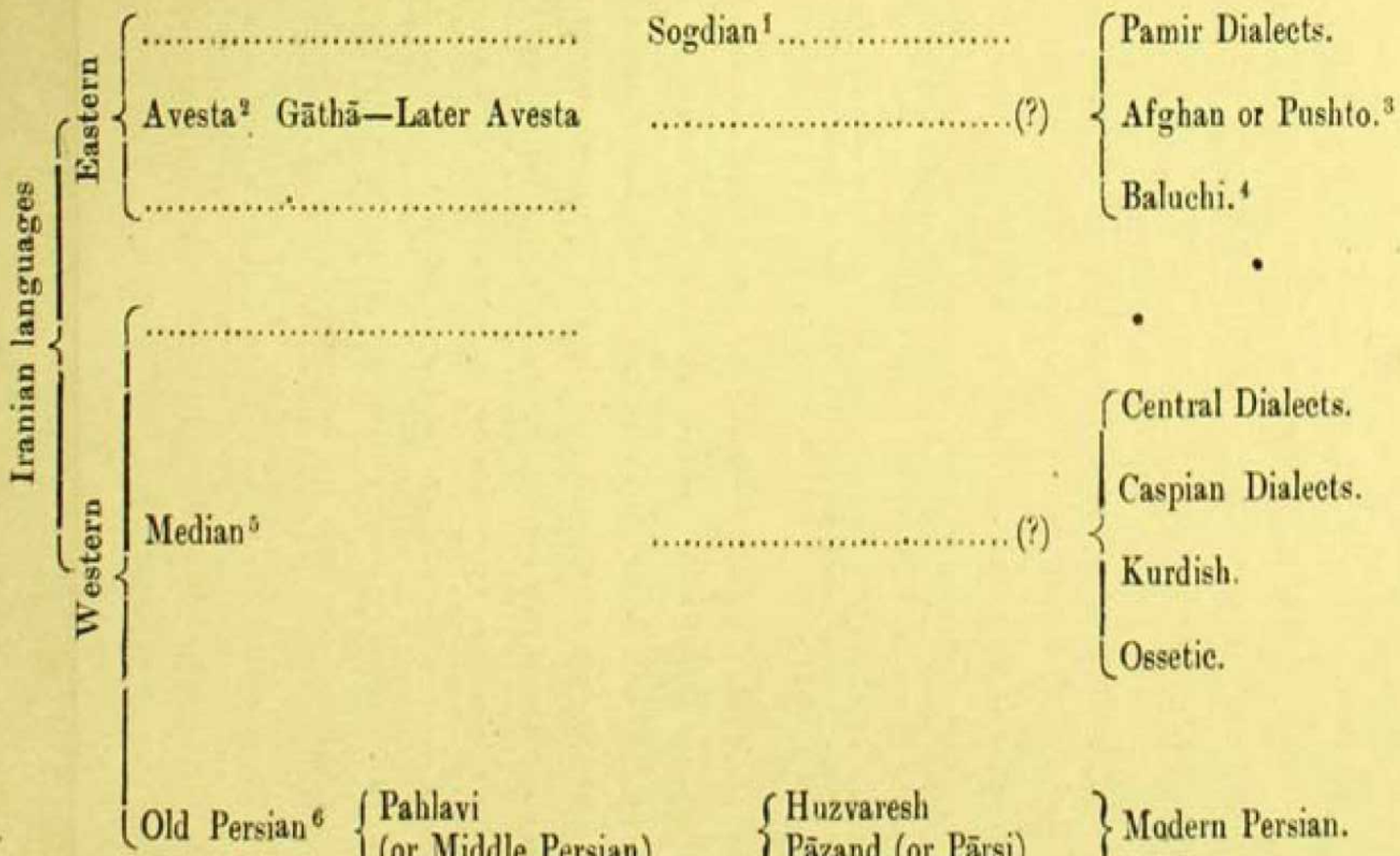
I (am) Darius the great king, king of kings; king of the countries of all sorts of peoples; king of this great Earth far and wide; son of Vīštāspa the Achaemenide, a Persian, the son of a Persian, an Aryan of Aryan lineage.

§ 19. *Divisions of the Aryan branch.*

As already mentioned above the Aryan branch is divided into two main divisions, the Iranian and the Indian. But there is a very interesting group of languages spoken from the borders of Kashmir right along the N.-W. Frontier of India, the Dardic group of languages, which have been put by Grierson and other scholars as representing a midway or a transition group between the two main divisions. This group is very probably the group of *Paiśāca* languages discussed by the ancient grammarians of India.

The genealogical table of these two main groups had best be shown separately.

(*a*) *The Iranian Group.*



[1] Some remnants of the Sogdian were discovered lately during the Turfan expedition. The language has been studied carefully and a very good grammar of it has been published by Robert Gauthiot. Very likely the modern Pamir Dialects are its descendents.

[2] The Avesta was called by the earlier scholars Old Bactrian because it was the language of the court of Bactria, whose monarch was the first to accept the religion of Zoroaster. There are several linguistic strata clearly marked in the extant Avesta literature, the oldest of which is called the Gāthā, from the Hymns of Zoroaster of that name. The *Gāthās* form, after the Vedas, the oldest literature among the Indo-European languages. Of the Later Avesta (or the Younger Avesta as it is often called) some portion (the *Vendīdād*) seems to have been composed about the beginning of the Christian era.

[3] Afghan is thought by some to be a direct descendent of the ancient Avesta.

[4] Baluchi is "the most primitive of all the New Iranian dialects" (Gray, *Indo-Iranian Phonology*, p. xii).

[5] Of the Median we know nothing beyond the name. Herodotus has in one place mentioned one word of this language, *spāka* (dog). We know nothing at all about any other dialect of ancient Iranian.

[6] Old Persian is the language in which the Achaemenian Kings left their records. These are found in the Cuneiform Inscriptions in many places, the most famous of them being the great Inscription of Darius at Behistun.

[7] Pahlavi was the court language of the Sassanian monarchs. It is a direct descendent of Old Persian. It is very considerably mixed up with Semitic words and phrases. In this mixed form it is called *Huzvāresh*, to distinguish it from the later pure Aryan form in which all Semitic element is carefully excluded and which was called *Pāzand* or *Pārsi*.

[8] Modern Persian is the most analytical of all the I.-E. languages. It has not changed very appreciably in its structure during the past twelve or fifteen centuries. It is connected directly with Pahlavi. Its vocabulary contains a very large percentage of Arabic words and in modern times a large number of words from European languages, especially from French have been also taken up. Considered as a whole the language is of considerable simplicity and of great power. It has got an unbroken literary tradition going back at least to the ninth century of the Christian era. It has been the language of a great culture and has been closely studied in lands other than Persia, especially in India, where it had been the court language during quite 800 years. It was also the language of diplomacy all over Asia during an equally long period. In modern times there are visible in Persian language and literature the signs of another mighty renaissance.

## CHAPTER IV.

### Growth of Languages.

§ 48. *The chief influences affecting the growth of languages.*

The study of the growth of languages becomes one of deep interest, when we also bear in mind the races that have used them in the course of their evolution. In an elementary treatise like this one can but mention and discuss in the barest outline the main influences which have exercised an influence in the development and growth of languages.

These may be classified broadly as under :—

(i) Physical (e.g., geographical) influences,

(ii) Racial influences and racial admixture mainly due to political and economic reasons,

(iii) The mental outlook (as a whole) of the people, and

(iv) Cultural influences, including religion, art and literature.

Each of these is of considerable importance and interest and it would hardly do to neglect any of these factors from our consideration.

The last-named factor is the most important one from many points of view, for it is the factor that gives stability and balance to a language.

§ 49. (*i*) *Physical influences.*

The physical (or what are sometimes called the "geographical") influences are of considerable importance as is well known to students of history and anthropology. It is only lately that the influence of geographical environment

on culture is being studied with some attention.[1] Whether a country is a desert or is mountainous, whether it has large rivers or not, whether the sea-board is of considerable extent or not and whether there are many large harbours along the coast, all these factors have a direct bearing on the culture and development of races. And in so far as culture is reflected in speech they have a bearing on language as well. The coldness or dampness of the climate affects the food supply, and consequently the physique, the character and the mental outlook of a people. These factors are also reflected in the language of a people. The rigours of the frozen north made the Northmen of Europe an extraordinarily hardy race, and their coasts deeply indented by the long *fjords* afforded safe harbours to these people. Moreover owing to the lack of large arable and grassy tracts in Scandinavia, fish became an important article of diet and this naturally made these Northmen a nation of hardy sea-rovers. They spread over the whole of Europe during the first millennium after Christ and profoundly affected the ethnology, the culture and the languages of that continent.[2]

The chief physical features of Greece are her limestone mountains, which effectively cut off one small valley from another. The absence of any large surface stream[3] made communication between one valley and another a

[1] See the Introduction to Helmholt's *World History* by the late Viscount Bryce. Modern historians lay considerable stress on geographical conditions. The classic example is that of Greece.

[2] They even penetrated to the frozen coasts of Labrador and we may hope to get some day some further evidence of their presence there.

[3] Because water soaks through limestone.

matter of considerable difficulty.[1] This led, politically, to a development of city-states and to the peculiarly aristocratic polity of most of them, for naturally the few true Greeks in each district would bind themselves in a close aristocracy for self-defence against the native population.[2] Linguistically this led to the development of a large number of mutually (more or less) unintelligible dialects.[3]

### § 50. *Some more examples.* (*a*) *India.*

The examples of India and of Iran may also be considered in some detail. In India the great northern barrier has effectively prevented any influence penetrating from there, except what could trickle through the passes. It was chiefly through these north-western passes that wave after wave of various peoples broke over the fertile vallies of the Indus and the Ganges They left their mark on the culture and the languages of the peoples. The ancient tribes (among whom the Dravidians predominated) were pushed further and further back until at the present time they have been squeezed back into the extreme south and south-east of the peninsula.[4] The

[1] Especially in the absence of the horse, which is not a native animal in Greece. The natural home of the horse is on wide grassy plains.

[2] The Greeks had originally come in from the north. We have very little information about the aboriginal inhabitants of Greece because the proud Greeks never condescended to record the customs or the history of these "helots."

[3] So great was the divergence in some cases that the Athenians thought the dialect of Macedonia to be a barbarous tongue and numbered the Macedonians among the *Βάρβαροι* (the Barbarians).

[4] Of course this refers mainly to the Dravidians. They have, however, left a remarkable "linguistic island," in Baluchistan where the *Brāhui* language belonging to the Dravidian family still survives. The

Aryans were among the earliest who broke through the Afghan passes. There were a great many such waves at "the dawn of history"; and when we come to the recorded historical inroads[1] we find the Aryan languages and Aryan culture in undisputed possession of the fertile plains of Hindustan. The language and the culture were both vigorous enough to absorb (almost completely) the foreign elements that came in with the *Śakas*, the *Huṇas* and others.[2] The increasing fertility of the soil as the Aryans passed eastwards, due to the damp, hot climate, produced ample food and gave time and leisure enough for the cultivation of the arts and crafts, as well as for thinking out the complex problems of the here and the hereafter. The drier and less fertile tracts of the Panjab necessitated a continual struggle with nature. Hence we find that as long as the Aryans were in the Punjab the literature was vigorous as also the language and that as they extended their sway eastwards into the Ganges valley there grew up a deeper speculative philosophy and with it the language also acquired a special fluidity to express the subtle differences of human thought and emotions. With the growth of material and intellectual riches the population increased and soon after an outlet to the sea

other aborigenes were driven into the forest tracts of Central India (the epic forest of Daṇḍakā) and into the marshes of East Bengal and Assam. No doubt this Āryan pressure stimulated colonising activities among the Dravidians and the Eastern Bengal people in the early days and led to the spread of Hindu culture in what is called "Further India."

[1] Among the earliest such was that of Darius the Great of Iran in B. C. 512.

[2] It may be noted that as the innate vigour of this ancient Aryan culture declined, greater and greater influence was exerted both on the culture as well as the languages by the later foreigners; Islam and the West have both influenced India to an extent which no earlier invasion has ever done.

had been found at the mouths of the Ganges the Hindus turned their thoughts towards lands beyond the eastern sea and laid the foundations of what may be termed Greater India.[1] In the south too we find the Aryans expanding, pushing the Dravidians before them. But the Aryan polity very soon recognised that these original sons of the soil were necessary for their well-being and so they were recognised as part of the Hindu social and religious world and these Dravidians helped very largely to spread the idea of Greater India.[2]

But the Dravidians had been a seafaring people even before the Aryans arrived in India. Australian languages show very close affinities to the Dravidian languages and there is reason to believe that the Dravidian people had at one time colonised that land. Then again towards the west coast it was the Dravidians who maintained the sea-borne trade with the Semitic people of Babylon. The Semitic languages (Arabic for instance) show a lot of words from Indian languages, especially names of those commodities which were obtained from India, and in a majority of these cases the words are from the Dravidian sources. An interesting example of one such word is the name for "rice," which is evidently a loan word in all the languages of the western countries. The word was first borrowed by the Semitic people from the Tamil *arisa* and thence through the Semitic and Greek the word has passed to all European languages.

[1] Especially in Java and Cambodia. The fervour of Buddhism was also a very important factor in this colonising; but it came in at a later period.

[2] They had by this time imbibed sufficient Aryan culture; so that the culture they represented differed in no way essentially from that which had been carried across by the northern Aryans from the Ganges delta.

It is well known that the West coast of India has got only two large rivers, and that there are but few natural harbours. Hence we find the foreign influences only among those people who lived near the mouths of those two rivers, and we find that Gujarati shows a very large percentage of pure Semitic words. This is because the two great ports of Surat and Broach were situated in Gujarat at the mouths of the two rivers, the Tapti and the Narmada In fact Broach was known to the Greeks, and even in the Babylonian writings it is mentioned as a flourishing centre of trade.[1]

## § 51. (*b*) *Iran.*

In Iran, too, the physical features have considerably influenced the linguistic development of the land. We find for example a fairly well marked division all through history into the Eastern and the Western Dialects. Of these the former have always been more purely Aryan in their structure than the latter. The Western languages have always shown a greater admixture of Semitic words and phrases. The structure even was affected when the Iranian races adopted the Semitic mode of writing. The classic example of Pahlavi may be quoted. The earlier scholars were in great doubt as to whether this language was at all Aryan.[2] The homeland of Western Iranian Aryans was Fars, the fertile

[1] Bombay, of course, existed as a cluster of rocky islands long before the British period; but the possibilities of the harbour had long been known, as the northern parts of Bombay harbour—the Kalyan creek, which communicates through Bassein with the open ocean, has always been used. Kalyan and Bassein have always been seaports of great importance.

[2] Much the same sort of controversy is raging at present among scholars regarding the exact family relationships of the Hittite speech.

plateau, roughly occupying the south-western part of the country, and from here vigorous races and empires took their rise in succession. Ispahan, at the centre of this plateau, was the capital of this empire for centuries, and the ancient Persipolis and Ecbatana[1] were also situated on the same plateau. The modern northern capital, Tehran, owes its rise mainly to political reasons. In the centre there are arid deserts which afford hardly any support to life, and further to the east lies the region of mountains (Kohistan), which in later ages afforded refuge to the Zoroastrians. The intervening desert has effectively kept the languages of Western Persia distinct from those of Eastern Persia and of Baluchistan and Afghanistan. In Persia we have also to consider the question of the change of climate and fertility of the soil even within historical times.[2] The desert has distinctly grown in extent within historical times and some of the ancient cities have been completely overwhelmed by sand. The land is practically bounded on all sides by mountains but these have always been fairly easy to cross and we find all through history various races coming in from the north-west and north-east and south-west. The main features of Persia are on the whole a continuation of those of Central Asia. Aridity is a marked feature chiefly owing to scanty rainfall and this fact makes this region one "in which cultivated districts capable of sustaining population are rare and far apart."[3]

### § 52. (*ii*) *Racial influences and racial admixture.*

Enough has been said in the preceding paragraphs to show that geographical and climatic influences exercise

[1] Modern Hamadan.

[2] See Sykes, *History of Persia*, Vol. I, Chap. I.

[3] Sykes, op. cit., Vol. I, p. 8.

a very profound influence on human lives and human culture. Depending on these physical environments (though exactly how has not yet been clearly understood) each region develops a special race type[1] and a special culture. When races intermingle from whatever cause (political, economic or any other) the result is faithfully mirrored in their languages. The language of the people after the intermingling is a sort of "resultant" of the constituent factors. The subtle psychological interactions between two or more races can be faithfully traced in their linguistic history. The resulting language has as basis the strongest language of the intermingling units. The strength of a language lies mainly in the *culture* it represents and is sometimes due to political causes as well. As a result of linguistic admixture the strongest language absorbs whatever is needed from the others and becomes richer. We can observe that at the present day in the evolution of the language of the United States of America. Though based on English it has been enriched by elements from every language of modern Europe. The people drawn from all the countries of Europe are being welded into a homogeneous whole and the language also is showing special characteristics of its own which mark it out as distinct from the English of England. There is a "vim" and a raciness about the American which is not found in the more solid language of the mother country.

American English is an example of a European language which in another continent developed under many and various influences. A contrary case, where a European language has developed practically isolated in another land, is that of the Spanish of South America.

[1] The modern American race, though of very mixed parentage, is conforming more and more in its physical features to the older Red Indian races.

Spanish in its European home has been subjected to the various influences of her neighbours, but in South America it had grown up in dignified isolation, except for the borrowing of a few words and phrases from the Indian languages around.

When two races commingle the effect upon the resultant language is decidedly in the direction of greater simplicity, especially if the races speak languages of entirely different linguistic stocks. The natural tendency in a language to grow from the synthetic into the analytic is undoubtedly greatly assisted by such a commingling of races. This is very clearly seen in the history of the Persian language. Persian had become practically completely analytic by the beginning of the Christian era. The reason for this change was undoubtedly the influence of the Semitic peoples with whom the Aryan-Persians early came into contact. And to-day the Persian language is the most completely analytic of the I.-E. languages.

Another good example of a mixed language due to a mixing of races is the peculiar dialect of English, which is used extensively among the Pacific islands. This is known generally as "Pidgin English." It is really English spoken in the Chinese way. Negro English is another interesting example of such a linguistic fusion.

### § 53. (*iii*) *The mental outlook of a people.*

It is indeed a literal fact that language reflects the mind of a people. And the whole mental and moral history of a people can be read as much in its language as in its literature. It is in this connection that the Science of Semantics comes in most useful.[1] Each word has a

[1] See below, Chapter VI.

history, which when properly read throws light upon many an obscure point of the cultural and mental history of a nation.

In considering this part of our subject we have also to consider the influences of racial commingling. When two peoples mix they may either fuse together after a time, in which case the resulting language is vastly enriched. We have two excellent examples of this in English and Persian. Modern English when it emerges in the days of Edward III, is a happy fusion of "Saxon, and Norman, and Dane" and the resulting language is far more powerful and vigorous than its constituents.[6] Similarly Modern Persian when it emerges after the Islamic conquest of Persia is a far richer language than the Pahlavi (her mother) owing to the rich stream of Arabic which meets it.

In India also we find from the various languages how the mental and cultural outlook of the people changed from age to age. Thus the alternating periods of "Sanskritising" which are found in all our vernaculars are the precursors of religious or national revivals, which deriving their inspiration from the past have always culminated in a fine outburst of what might be called "Romanticism," which leaves the vernacular richer than before.

### § 54. (*iv*) *cultural influences, religion, art, literature, etc.*

All the three types of influences, which we have been considering so far, tend to change in language. These represent to a certain extent the disruptive tendencies in the life of languages. If all these influences worked unchecked they would in the course of a few generations

[6] See the very instructive chart of "the stream of the English language" given in the *Ency. Brit.*, art. "English Language."

change a language absolutely. This is what actually happens with uncultured races. A famine, or the scarcity of game, may lead some younger men of a primitive tribe to migrate elsewhere. There they get a different outlook upon life, they come into contact with men of a different tribe, and the result is that if they return a few years later to their mother tribe they are unable to hold any communication with those they left behind. Even in the same place the dialect would change too rapidly were it not for the folk-songs and the religious incantations of their "medicine men." Religion and literature (whether written or unwritten) form the most precious heritage of humanity all the world over; and it is these that give a stability to language. And these same form the greatest bonds of union among peoples of utterly different races. It is a very significant fact that all literatures have begun with religious chants. We need instance only the Vedas in India and the Homeric Hymns in Greece. A great religious work is looked upon as sacred and consequently as a standard to which all other writing must conform. And in all ages and in all lands we find that it is a great religious book which starts a new age in literature. Classical Arabic dates from the *Quran*, Modern German begins with Luther's *Bible*, and Hindi Literature has been profoundly influenced by the *Rāmāyaṇa* of Tulsidas. Once such standard is set it is only a great genius who can hope to change it in any manner, and this too he can do more effectively by appearing to conform to the standard thus already fixed. Of course, a language changes in the course of ages, but still the ancient forms have always a potent influence on its life and this is clearly seen by the periodical revival of the "classical" style which is observable in all great literatures.

Language and literature, especially religious literature, form the most potent factors that bind humanity together, and hence we see all great benefactors of humanity have dreamt of a "Universal Language"[1] and of a "Universal Religion."

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[1] See Appendix D for a discussion of this question.

# CHAPTER V.

## The Intellectual Laws of Language:

## Analogy and Kindred Phenomena.

### § 55. *The speaker is the most important consideration in language.*

It has been already hinted above that the modern tendency in linguistic studies is to lay stress upon the psychological aspect of speech. In considering any type of language we have to consider the subject from two distinct aspects: (1) the physical and (2) the psychological. The former concerns itself mainly with the vocal organs and the physical production of sound. This is mainly considered under *Phonetics*. Depending as they do on the physical laws governing the vibration of the vocal chords and the manipulation of the vocal organs, these phonetic changes in a language can be formulated with a considerable degree of accuracy. Phonetic laws (as we shall see later on) have now almost attained the exactitude of the laws of physical sciences. The second, or psychological, aspect concerns the speaker, or, to put it more accurately, the *mind* of the speaker, which is at the back of every utterance. Whenever a man is uttering speech-sounds his mind is working, and it works during every moment of the utterance. And this activity of the mind has a special bearing upon the development of speech. Psychology has been fairly carefully studied in

modern times and the rules of mental working have been carefully investigated. Thus the disturbing factors in the growth of human speech, which are due to the activity of the human mind, can be followed and investigated.

§ 56. *The psychological factor is variable in its value.*

But though in any given individual case the psychological factor can be followed up and its full effect estimated, still no general rules have yet been laid down which would govern all cases that may occur. The reason is that no one can foresee the direction in which human mind would work under a given set of conditions. We can nearly always trace the underlying mental processes by which a particular word was produced or its meaning changed. But we cannot say that given the same circumstances another similar word would acquire the same form or undergo similar changes of meaning.[1]

The human mind is proverbially free to go where it listeth.[2] Hence all that can be done is, that *after this factor has done its work* the result can be investigated and the psychological reasons underlying a particular change or a special departure from the normal

[1] A new underground railway line was opened in London about twenty years ago, and the name "Bakerloo Railway" was suggested for the line, because it ran between Baker Street and Waterloo stations. The name was accepted by all. A few months later another line was opened; and a name built up exactly on the same principles as 'Bakerloo', and equally well-sounding, was suggested for it, but was not taken up at all.

[2] Though used in a different context the verse of the *Bhagavad-Gītā* (vi. 34) is very apt for our purposes also:

चंचलं हि मनः कृष्ण प्रमाथी बलवद्दृढम्।
तस्याहं निग्रहं मन्ये वायोरिव सुदुष्करम॥

may be discovered and explained. What we cannot attain is the power of prophecy, of saying beforehand what the ultimate destiny of a particular form may be. In fact this psychological factor only helps us to understand why certain departures from the normal have occurred in every language. In considering the grammar of any language, as every school-boy knows to his cost, the exceptions are very often quite as numerous as the normal examples of a rule. The psychological factor furnishes us with a very reasonable explanation of this fact. It is this factor which gives to the study of linguistics its special charm and makes it what it really is—a *human* science.

### § 57. *The association of groups in the mind.*

It has been noted by all observers that the human mind thinks in groups. The very origin of concepts is a direct result of such an association of groups. We have already seen[1] that a concept results from a number of percepts being associated together in a group and the common factor being extracted from it. These groups are to be found in every mind and each individual mind possesses its own set of such associated groups. And thinking processes conducted in accordance with these groupings are the easiest and most fruitful. Hence we find in every system of "memory-training" stress is laid on the formation of such associated groups. And all educationists know how easy it is for a child to learn by associating new knowledge with groups already existing in its mind. The link between the unknown and the known is through these groups. So we find that in language also there exist such groups of associated sounds and words and meanings. And just as it

[1] Chapter I (§ 7).

happens in the case of children, one set of associated ideas may appeal to one person but may not evoke any response from another mind. These association groups depend entirely on individual idiosyncracies and what is a natural grouping to one mind may be a very far-fetched connection to another. This individual idiosyncracy is the chief reason why no rules can be laid down as to the direction along which this psychological factor would work in the case of a particular word or phrase. But recognising as we do that this factor exists, we can explain almost every individual example of such working and can satisfactorily trace it to its origin.

§ 58. *The acceptance of linguistic change by the community.*

Words or constructions formed in this manner, though they may be explained quite reasonably, are not necessarily accepted by the community. To be accepted and to be received into current speech each new formation should appeal to the peculiar characteristics of the people (very often to their sense of humour) and they must also come at what may be called "the psychological moment". Many fine words and phrases have been thus accepted and received as "good and standard forms" in language, but others equally good have been rejected either because they failed to tickle the public fancy or because they came at the wrong moment. The Great European War was a peculiar psychological period, when sensibilities were particularly tense and when certain matters struck the public, and consequently a very large number of new words and phrases struck firm root in the languages of the fighting nations. One remarkable word of that period is *Blighty* the anglicised form of the Hindustani विलायती

which doubtless has been influenced by the slang, "blighter". "Gone west" is a phrase which had been used long before the War but it came into popular use only since 1914. Words like *Dora*, *Anzac*,[1] etc., have been found on a principle which had been applied a couple of centuries earlier, but except the word *Cabal*,[2] which is known only to students of English History, words of such formation were practically unknown in English before the War.

## § 59. *Analogy.*

It frequently happens that a certain group of words are associated together in the mind of the speaker. This association may be due to any reason—phonetic or other; and when another word seemingly related to that group comes along, the human mind desires to put the new word also in a form such as may make it recognisable as belonging to that group. A few examples will make the matter clear. In English, for example, we find the words *shall* and *should* and also *will* and *would*. And from analogy we get *could* from *can*. The forms *should* and *would* have the letter *l* quite correctly; but there is no reason whatever for *could* to have that letter. The only reason is the working of analogy; because *shall*, *will* and *can* are the

[1] By taking the initials of "Defence Of the Realm Act", "Australia and New Zealand Army Corps".

[2] This was the name of a notorious cabinet under Charles II and made up from Clifford, Arlington, Buckingham, Ashley and Lauderdale. Here too, the influence of the Hebrew word *Kabalah* helped the acceptance of the word. Cf. also the ancient prophecy current in the days of Queen Elizabeth. "When *Hempe* is spun, England's done". The word *Hempe* was ingeniously made up from the initial letters of the Tudor sovereigns, Henry (VII and VIII), Edward VI, Mary I and Philip, and Elizabeth. After the accession of James I it was no longer England but Great Britain.

three auxiliaries of mood and hence closely associated together in our minds. So what happens in the case of the first two must also happen in the case of the last, hence we have the uniform preterite forms, *should*, *would* and *could*.

Every language can furnish numbers of such instances where real or fancied [1] resemblance to a group of words brings a new word into the group and causes a strange form which needs explanation. Thus from Sanskrit we may cite some examples.[2] We have in Sanskrit a very peculiar type of declension, that of feminine nouns ending in -इ and -उ (like मति and धेनु) when the sigulars of the Dative, Ablative, Genitive and Locative cases show double forms. Of these forms one is of the type of the masculine nouns in -इ and -उ (like हरि and गुरु) and the other is of the type of the feminine nouns ending in -ई and -ऊ (like नदी and वधू). The reasons for these two forms are to be found clearly in analogy. For the masculine type there is the group of words ending in -इ and -उ, the vast majority of which are *masculine*, whereas for the feminine forms the association is with the group of words which are *feminine* in gender. Thus मति and धेनु would be felt as feminine words inspite of the final short vowel.

### § 60. *The extension of the dual number in Sanskrit.*

As another example we may cite the dual number in Sanskrit. As with the other languages of the I.-E. group the dual number was used in the earliest period of

[1] When this happens it is called "false analogy". See below, § 61.

[2] A good collection of examples is to be found in the article by V. S. Ghate on "The Influence of Analogy in Sanskrit" in the *Bhandarkar Commemoration Volume*, pp. 339 ff.

Sanskrit to denote pairs which always went together. Such were the dual of the limbs of the body ( पादौ, कर्णौ ) and of pairs of beings who are always associated together ( पितरौ, मित्रावरुणौ, रामलक्ष्मणौ etc.), and we may also include here "pairs of opposites" ( सुखदुःखे, जयाजयौ etc.). These duals may be styled "natural duals".[1] And in the earlier stages we do not get any other types of dual at all. But, by a sort of extension, we find the dual number in the case of *dvandva* compounds like काककूर्मौ, सिंहशृगालौ etc., where the association is not "natural" at all. This is a sort of extension of the province of the dual number owing to (1) the ease with which *dvandva* compounds could be formed and (2) the association of the ideas being altered from "natural duality" to mere "duality" whether "natural" or "accidental".

## § 61. *False analogy.*

Many of the earlier writers spoke of "false analogy"; but it is a misleading name, and it is just as well that modern writers generally agree to drop it. What is implied by the term is that the analogy is applied under the mistaken notion that a word belongs to a particular group, when as a matter of fact it does not. In a sense all analogical formations originate from such mistakes, and so they are all "false" to a greater or less degree.

## § 62. *The working of analogy.*

The working of analogy may be put down in the form of a mathematical ratio. And this can be best seen by observing the talk of children. Once two boys were

[1] Of course, when specifically *two* individual objects or persons were mentioned the dual was used. For this also is a "natural dual".

discussing with great emphasis some matter, and one of them very emphatically denied it, saying, "No, it is *not* ". The other immediately retorted, " It is *sot* ".[1] Here, the process which was working in the mind of the second boy can be clearly expressed mathematically thus :

*no* : *not* :: *so* : *sot*.

Another case came under my observation quite recently. A child of four coined a new Gujarati word નરઘમ (hen) from the masculine નરઘો (cock).[2] When asked to explain the new word, he gave the correct explanation, that just as સિંહ gives સિંહણ, ધોબી gives ધોબણ, so must નરઘો give નરઘન.

Another case which also illustrates clearly this working of analogy may be quoted from the artificial world-language, Esperanto. Dr. Zamenof (the inventor of this language) took up the German word *Fräulein*, and, changing it to *fraulino*, adopted it into Esperanto to indicate a young (unmarried) girl. The *-lino* here is originally the German diminutive suffix *-lein*.[3] But in Esperanto *-ino* is the feminine suffix, hence it was easy for Zamenhof to coin a new word *fraulo* to indicate "a young (unmarried) man", " a bachelor ".

## § 63. *The effects of analogy.*

The principle of analogy plays an extremely important part in the development of languages. Its main effect is seen in a tendency to level down irregularities in grammar and also differences in word-formation. This is

[1] I am indebted for this story to my teacher, Dr. Peter Giles, the Master of Emmanuel College, Cambridge.

[2] The correct fem. is નરઘી.

[3] *Fräulein* is "little woman", hence "an unmarried girl", " a Miss ".

seen especially in the case of languages which have come under the influence of racial admixture. Naturally foreigners trying to speak a language would take up the formation which is the largest numerically, and would tend to put all others at the same level by analogy. For instance, the plurals of nouns in English, except in a very few cases, have been regularised and are made by the suffix *-s*[1]. Contrasted with these are the various methods of plural-building in German. Both English and German were at the same stage of development about a thousand years ago, but English has come under foreign influences to a far greater extent than German and hence the levelling tendencies of analogy have had greater scope to work in English.

### § 64. *Contamination.*[2] (*a*) *Verbal.*

Another very interesting phenomenon in language, seen especially in the field of syntax, is what is known as *contamination*. It occurs when two ideas or constructions come up in the mind of the speaker simultaneously or following each other so closely that the two get fused into one, each "contaminating" the other, sometimes it is expressed in strange-sounding words known as "portmanteau-words",[3] where two words fuse together to form one.

[1] Of course the rules about plurals ending in *-es*, *-ves* etc., are purely phonetic. The only other plural suffix found in English to-day is *-en* and that too is going; *kine* and *een* (persisting in Scotch) have been replaced by *cows* and *eyes*. There is no reason why *oxen* may not be replaced soon by *oxes*. *Children* will probably persist longer because of its double suffix.

[2] For a detailed treatment of this, see an essay by myself on "Contamination in Language" in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III (Orientalia), 2, pp. 603ff.

[3] The name is found in Lewis Carrol's fascinating *Through the Looking-Glass and what Alice found there*. It is Humpty-Dumpty who expounds their structure.

Thus, *camēleopard* is an animal tall and long-necked as a camel and spotted like a leopard ; " galumphing " is galloping and triumphing. A very good instance of this process was the H. M. S. *Zubian* during the Great War. There were two British cruisers the *Zulu* and the *Nubian* and they were both badly damaged. The undamaged halves of the two were put together and the new vessel was called by the combined name of *Zubian*, which puzzled the Germans not a little !

### § 65. *Malapropisms and Spoonerisms.*

*Malapropisms*, which are known to all readers of R. B. Sheridan, are also contaminations of a sort. Here two words of nearly similar sound are confused together and the confusion is mainly in the meaning. " The *allegory* on the Nile " is well-known. In my own observation I have come across " he *standards* (tenders) his apology " and " he is a *stamina* (stigma) to the family ". *Spoonerisms* may be called " phonetic contaminations ". They are a species of *lapsus linguae*. Where two sounds in two different words are transposed we get a funny combination. These are by no means usual, and beyond causing a laugh they do not influence the language. Their name is due to Dr. Spooner of Oxford, who was prone to such lapses.[1] One of the finest examples of his lapses was where he was asked by a porter at the station about his luggage and he said he had only " two *rags* and a *bug* " (two bags and a rug). Another time he is said to have reprimanded a student by telling him that he had " *tasted* a whole *worm* " (wasted a

[1] Most of the examples fathered on him are apocryphal. There was an exceedingly funny article on " Spoonerisms " many years ago n the Strand Magazine,

whole term). When such transpositions occur *within the same word* they are called *metathesis* and they are often accepted as such in language.

### § 66. (*b*) *Syntactical contamination.*

As already mentioned, contamination is found mainly in the domain of syntax. It is mainly due to the fact that thought often moves faster than speech. Here before an idea embodied in a sentence is fully expressed, another idea arises and the two resulting sentences get fused together. These are sometimes called "pregnant constructions" by grammarians. A good instance of this is इन्द्रश्च सोमं पिबतं बृहस्पते, where a nominative and a vocative are yoked together and consequently the verb is in the dual. It is clearly a confounding of two sentences इन्द्रः सोमं पिबतु and त्वं च बृहस्पते सोमं पिब. Another example is दारुपात्रं च मृण्मयम्, where one adjective of the noun पात्रम् is compounded with it and the other is given separately.[1] Among English writers Shakespeare and Milton abound in such sentences. One of the finest examples is from Milton :

> Adam the goodliest man of men since born
> His sons ; the fairest of her daughters, Eve.[2]

### § 67. *The human mind disregards rules of grammar.*

The main point sought to be emphasised in this chapter may be stated in one sentence : "the human mind disregards rules of grammar". The mind is mobile and restless and none can predict how a particular human

[1] Such constructions are the rule in German, e.g., *Eisen- und Strassenbahnen* (lit., "rail- and tram-ways".)

[2] *Par. Lost*, iv. 324-25.

being would respond to a particular set of circumstances. This is a very important factor in language growth. What grammar does, and should do, is to systematise and classify *the facts* of a particular language at a particular period. It is not the business of grammar to dogmatise or to lay down rules of speech. Every language has numerous dialects, and what may not be "correct" in standard or "learned" speech may be quite acceptable in a "vulgar" dialect. And what is "vulgar" to-day may become perfectly "correct" to-morrow. As an example we may note that the *h* in *humble* was "silent" not very long ago, but it is not so now ;[1] and I would not be surprised if in the near future the word *honor* also has its *h* clearly pronounced. Words and forms and phrases which are not recognised by our grammatical text-books may find a place in standard grammars of the future if only a great and popular writer once uses them.[2] In short there is nothing "ungrammatical" in language, only some forms and constructions are "unrecognised" till some great person uses them. Hence, too, the need of issuing authoritative grammars of various languages from time to time. France and Germany have been doing this once in about ten years and it would be a great service if all important languages were treated similarly.

[1] Some think it was due to Uriah Heep's "umbleness" that good and respectable people began to stress the *h*.

[2] महाजनो येन गतः स पन्थाः .

# CHAPTER VI.

## Semantics: the Science of Meaning.[1]

### § 68. *Semantics, a comparatively new branch of linguistic science.*

The Science of Meaning or Semantics is a comparatively recent development of linguistics. People have at all times recognised the fact that meanings of words change in course of time and all writers on linguistic science have notified this but it is only recently that this branch of linguistics has been treated systematically and scientifically. The first important work on the subject was that of Bréal [2] and since then several scholars of repute have given time and thought to the subject. Except for a few stray articles not much work on the subject has been done for oriental languages.[3]

### § 69. *Changes of meaning in borrowed words.*

When words are borrowed bodily from one language into another we get a change of meaning in most cases. The significance in the original language is bound to

[1] I am greatly indebted to the excellent treatment of this subject by T. G. Tucker in his *Introduction to the Natural History of Language* (pp. 373-396). I may say here that I have striven to give examples from Indian languages and most of these are naturally from my own language Gujarati.

[2] *Essai de Sémantique.*

[3] A notable article is that of Mr. Hemantakumar Sarkar on "The Intellectual Laws of Language and Bengali Semantics" in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III. 1. It is based on Bréal's book as regards classification and arrangement.

undergo some change in the new environment in which the word finds itself. Such changes often come on quite gradually. Thus if the name of a plant or an animal has been borrowed from one land into another, it will in course of time come to mean a different plant or animal altogether. The Persian word *shīr* (lion) in Urdu and other Indian languages comes to mean "tiger".[1] The word *daryā* which in Persian means "river"[2] retains that sense in Urdu, but in Gujarati the word means "the sea". There have been a large number of words borrowed in the vernaculars of India from English and other European languages and some of them have undergone really strange transformations of meaning. The word "grapeshot" fairly common in the days of the East India Company has come into Gujarati as गरभकोट and is now used as slang for "a tall story".[3] The word गिरमिटया is a derivative of "agreement",[4] and is now used exclusively for "an indentured labourer" (lit., one who has entered into an agreement). Another word is the Gujarati word बासकुट used for a "lady's blouse", though itsorigin is "waistcoat". Another very interesting example is the word कलाक which means "hour" in Gujarati and is obviously from "clock" —the instrument which shows the hour.[5]

### § 70. *Changes of meaning between cognate languages.*

When we compare words of different languages which are phonetically connected, we are struck forcibly by the

[1] It is pronounced *shēr*.

[2] Cf. *Amu-Daryā* and *Sīr-Daryā*.

[3] A modernised version of "drawing the long bow".

[4] Note the dropping of the initial *a-* due to the stress accent following.

[5] Cf. Hindi (and Bengali) घड़ी and Skt. घटिका.

differences of meaning as we pass from one language to another. Thus Skt. धूम: is the same phonetically as Grk. *θυμο'ς*, but the Greek word means " soul " or " spirit ". So also आत्मा is cognate with Grk. *ἀτμο'ς* which means " smoke " or " vapour ".[1] An extremely interesting list of words could be made of words derived from Sanskrit (or from Persian and Arabic) which have passed into the Indian Vernaculars but have meanings different from the original and also differing from each other. Thus the Skt. वाटिका gives Gujarati वाडी, which is " garden ",[2] but in Bengali it means " house " or " home". The masculine form in Gujarati वाडो means " a courtyard "; whereas in Marathi वाडा means either that or a particular " locality " in a town or city. The Skt. गृहम् is घर in Hindi, Marathi and Gujarati and means " house ", " home " or " building ",[3] but in Bengali the word means " room". In Gujarati बेटा (son, child) is a term of endearment, whereas it is a term of reproach in Bengali. आदर is " affection " in Bengali, but " respect " in Gujarati and राग means " anger " in Bengali and Marathi, while its original meaning in Sanskrit is " love". The change of meaning is very markedly seen in names of trees and animals ; this is quite natural, for as tribes migrate from one land to another they give to the plants and animals they meet the old and more familiar names. We have already seen the

[1] Hence the English *atmo-sphere*.

[2] In Parsi-Gujarati the word is used more or less in the sense of " a club", originally a small garden-house in the suburbs where people used to assemble for passing a pleasant evening.

[3] There is a Gujarati idiom (found chiefly among Parsis) घर करवुं (lit., to make a home) in the sense of " to marry". In this घर is almost equivalent to " wife". Cf. गृहिणी गृहमुच्यते. In Hindi " wife " is often called घरवाली (lit., the mistress of the home),

case of *shīr* (lion) being applied to the " tiger " in India. Skt. दारु (wood), Grk. δρῦς (the oak) [1] and Eng. *tree* are cognate but they mean different things. In the case of colours, too, such changes are to be noted, for colours can easily merge one into the other. Thus the Gujarati લીલો (green) is from Skt. नील (blue). Similarly with tastes there is liability of confusion ; in Skt. कटु means " sharp " or " hot " (as the taste of pepper) and तिक्त is " bitter " (as of quinine), but in Gujarati કડવું (Marathi कडू) means " bitter " and તીખું means " sharp " or " hot ".

## § 71. *Change of meaning due to difference of environment.*

So far we have been considering the change of meaning when words pass from one language to another. But within the same language, and often at the same period, one word may bear a variety of senses. Thus the word *bar* in English has very different significations to various people. To the magistrate and judge it brings up the idea of the prisoner at the *bar* ; and to the lawyer it calls up reminiscences of his call to the *bar* ; to the Lord Mayor of London it would usually signify the Temple-*bar*, the ancient limit of his jurisdiction, to the habitual toper it is the *bar* of the public-houses, to an M. P. it is the *bar* of the House of Commons, while to a sailorman it is the *bar* he crosses at high tide. Similarly *congress* to an American and to an Indian mean very different things. Different professions have each their " slang " or stock of

[1] The tree sacred to Zeus. Among the Hindus too there is the देवदारु the Himalayan pine which is sacred to Śiva ; cf. अमुं पुरः पश्यसि देवदारुं पुत्रीकृतोऽसौ वृषभध्वजेन (*Raghu*, ii, 36).

trade-words and the same word may be used by different people to mean different things. In Gujarati the word कलम when used at school means "pen", but in a garden it means "grafting".[1] Sometimes there is a slight difference in the form of the word corresponding to the difference of meaning, these are called *doublets* : e.g., Gujarati पान (betel-leaf) and पानां (playing-cards)[2] both from Skt. पर्ण ; पत्र (sheet of metal) and पाव[3] (leaf) and पव (letter), all from Skt. पव. •

## § 72. *Classification of semantic change.*

It is obvious that in meaning change also the principal factor is the human mind. Hence we cannot predict the direction in which the meaning of a word may change under a given set of circumstances. In other words we cannot lay down any definite "laws of semantics". But *after* the change has occurred we can always explain it ; and we can classify the various types of change of meaning and also tabulate the underlying reasons. All semantic changes can be classified under three heads : (*i*) *expansion* of meaning, (*ii*) *contraction* of meaning and (*iii*) *transference* of meaning.

## § 73. (*i*) *Expansion of meaning.*

A general word is used in a special sense more often than a special word in a general sense. Hence examples of "contraction of meaning" are far more numerous than

[1] Obviously because the twig to be grafted is cut obliquely like a reed-pen.

[2] This is a plural form.

[3] Spelt usually पांदड ; पाव is the dialect pronunciation.

those of "expansion of meaning". The Hindi word परसु (day before yesterday or day after to-morrow) can be traced back to Skt. परश्व: which means "day after to-morrow". From the future it has extended to past time as well, and in ordinary talk it means any time, past or future, without referring to any fixed point at all. Another instance is the Anglo-Indian word *boy* (in the sense of "man-servant"), which is applied to all male servants (except the cook) irrespective of age. The Parsis of Bombay usually speak of all Hindus as वाणिया (Skt. वणिक् ), which is but a special caste. Another example is a word used in some Parsi circles only. It is a modern and colloquial word बिस्मार्कीं. It is coined from the name of Bismarck, the famous Prussian statesman. The original meaning intended was "diplomacy", and the reason for the coining of this word was the famous telegram of Bismarck that precipitated the Franco-Prussian war of 1870. From that the meaning expanded to include "mischief" of every sort, even including that of children.[1] Other examples of expansion of meaning are to be found in proper nouns being used as names of objects, e. g., *Macintosh*, *Cognac*, etc., or the word गङ्गा used in some Indian Vernaculars (especially in Marathi)[2] in the sense of "river" in general.

[1] This word was very familiar to me in my childhood and it is still heard occasionally. It is strictly restricted to a narrow circle. But I think it deserves better recognition.

[2] In Gujarati there is a well-known line of Narasimha Mehta where the word is used in this sense :

गोळीतो गङ्गा थई रे अङ्गे उजळा थया छे केश (the water-jar serves instead of the river for bathing, and the hair on the body has grown grey), referring to the declining strength of old age.

### § 74. (*ii*) *Contraction of meaning.*

Examples of this type are naturally very numerous. A word having a general wide significance comes to be restricted to a certain special aspect, while another word does duty for the remaining part (or the whole) of the original signification. Thus the English word *tide* originally meant " time " and is cognate with the German *Zeit* ; but it is now restricted only to special times of the ebb and flow of the sea. The word *time* has taken its place. But in the proverb " time and tide wait for no man " the old sense is seen. Similarly the word *meat* in English originally meant any sort of " food ", but its sense is now restricted to " flesh-food " only. But the old sense is found in the word *sweetmeat* and in the phrase " meat and drink ". Some other interesting examples may be quoted. The word खुर्दो in Gujarati means " small change "; it is from the Persian word *khurdeh* " small ", which is used to indicate small bits of all sorts of things, as in the phrase *Khurdeh Avestā*, the name given to a collection of hymns and daily prayers of a miscellaneous character. But in the phrase खुर्दो करवो the original sense is preserved for it means " to break to pieces ". The history of the word *mṛga* in Indo-Iranian is a fine example. Originally it means " animal " generally. This sense is preserved in the Skt. मृगेन्द्र (lion, the king of animals). Later on in Sanskrit the word means a special animal, " deer ".[1] In the Iranian languages the word *murgh* (Av. *marəgha*) is used for a " bird " in general,[2]

[1] The English word *deer* has had exactly the same history. Originally it also meant " animal " generally, like its German cognate *Tier*. In its original sense it is used in the Bible, and in the phrase " mice and rats and such small deer " (*King Lear*, Act iii, sc. 4).

[2] Apparently a case of " transference of meaning ".

as in the name of the fabulous bird *Sīmurgh* of the *Shāh-nāmeh*, who took care of the infant Zāl.[1] In the Indian Vernaculars the Persian word *murgh* gives the familiar मुरग़ा, मुरग़ी (cock, hen).[2]

The word *paper* in the phrases "daily paper" or "government paper" clearly shows narrowing. So also the words *wire* (तार in India), *current* (when used for electricity) and hundreds of others used daily show specialised usage and hence a narrowing of sense. Even verbs denoting common actions become restricted, e. g., *to act*, *to drink*, etc.

### § 75. (*iii*) *Transference of meaning.*

Owing to association of ideas it often happens that a secondary sense attaches itself (originally unconsciously) to a word and gradually that secondary sense comes to be itself regarded as primary. Thus there is a transfer of meaning from one sense to another. The word गवांर of Hindi (गमार in Gujarati) means originally "villager". But in contrast to townspeople (who always pride themselves on their education and good manners) they are regarded as poor in intellect, hence in course of time the word came to mean "simpleton". Exactly similar is the history of Parsi-Gujarati देहकानी,[3] which now means "simpleton". So also *heathen* was "one who lived on the heath", hence he who was not aware of the teachings of Christianity. The Zoroastrians use the name दर्वन्द in the sense of one

[1] Also in the Gujarati word (borrowed from Persian) शाहमृग (the royal bird, ostrich).

[2] Exactly as the English *fowl* (German *Vogel*) originally meaning "bird", now means cock or hen.

[3] From Pers. *dihkān*, a landed proprietor, a country-squire.

who is not of their faith. Originally the Avesta word *drvant* means "going astray".[1] The Parsi-Gujarati word ખવાન now means "a dead body", but the Avesta *urvān* from which it has been derived means the exact opposite—"the soul". The transference took place probably owing to a sharp contrast, the soul departs and the corpse[2] remains. Another Parsi-Gujarati word is the word ભમ્મુ which is specially used to denote the Parsi Tower of Silence.[3] The word is a corruption of the Persian *bihisht* "the heaven-world"[4] to which the soul goes after death, but by a strange transference is used for the place to which the dead body of a Parsi is consigned. Then by an extension of meaning the word is used for the place where the dead of any community are disposed of. And so the lower classes of Gujarat use ભમ્મે ગયા (gone to the ભમ્મા) as a term of abuse.

### § 76. *Ahura- and daeva-words in the Avesta.*

The Avesta language shows a very remarkable peculiarity. It possesses two entirely distinct sets of words, the one applicable to divine beings and to the creation of the Good-spirit and the other to the evil beings and to the creation of the Evil-spirit. The great stress laid in

[1] The word is derived from *druj* (evil, untruth), and it means "the follower of untruth".

[2] *Corpse* itself shows a similar transference from a living body (Lat. *corpus*) to a dead one.

[3] It is used also by Hindus especially round Surat and Navsari which are strong centres of the Parsis. In Surat there is the largest structure of this kind in India and there is a plan of it hung up in the waiting-room there which is labelled પારસી લોકોનું ભમ્મું.

[4] From Av. *vahišta* (वसिष्ट), "best".

Zoroastrian doctrine on the utter contrast between Good and Evil has given rise to this peculiar feature. The series includes names of all limbs of the body as well as numerous common actions.[1]

Every language shows such con trasts between what may be called "polite" and "vulgar" words, e. g., German *Mund* (mouth) and *Maul* (muzzle, used only of animals), *essen* and *fressen* (both meaning "to eat" but the latter used only in a "bad" sense). English *breed* and *spawn*, *nail* and *claw* etc. But nowhere except among the Zoroastrians is the contrast shown in so thorough-going a manner. Even to-day the Parsis use the double series, e. g., खाउं or जमउं (to eat) but जोभरउं (lit., to fill up), पीउं (to drink) but ढोचउं (to guzzle),[2] सुउं (to sleep) but घींटाउं (to be huddled up) [3] and so on.

## § 77. *Reasons for change of meaning.*

It is extremely interesting to consider the various reasons that lead to these changes of meaning. As already pointed out we cannot lay down any definite rules for change of meaning; but *after* the change has occurred we can always explain the reasons for them. They are psychological reasons and very often several reasons may be found mixed up. The root principle in all is association of ideas. The reasons can be enumerated but it should be stated at the very outset that the enumeration is not exhaustive. Still the main reasons may be given as follows:

(*a*) Figurative speech and use of metaphor resulting from an effort at clearness of expression.

[1] See the article on this subject by L. J. Frachtenberg in the *Spiegal Memorial Volume* (pp. 269-289).

[2] The Parsi phrase ते खूब ढोचेछे is much stronger than ते पीयेछे when used for a drunkard.

[3] I am doubtful of the true sense.

(*b*) Change of environment, which may be (*i*) geographical or (*ii*) social or (*iii*) material.

(*c*) Politeness in addressing people.

(*d*) Euphemism.

(*e*) Irony.

(*f*) Emotional emphasis.

(*g*) Prevailing use of one type out of a class.

(*h*) Laxity in the use of words due to ignorance or misunderstanding.

(*i*) Indefiniteness in the meaning of the words themselves.

(*j*) Differences between individual conceptions of a word.

(*k*) Predominance of one element in the word.

(*l*) Unconscious inclusion of a secondary meaning.[1]

These may be considered separately in some detail.

§ 78. *Figurative speech and the use of metaphor.*

The desire of the speaker generally is to make his meaning perfectly clear, and to do that he has often to make use of comparisons. This is especially the case when abstract ideas are to be expresssd. We speak of "a *weighty* argument", or of "a *hazy* notion". Every language has got a large number of words which have originated in this way metaphorically. We *ponder* over a matter, when we weigh it in our minds. So also we talk of "*sweet* words" and of "a *beaming* face". In Gujarati we say of a worthless person that "he lacks salt" ( એનામાં મીઠું નથી ).[2] Not only abstract terms but even concrete objects may be described figuratively. Thus we have "the *teeth* of a saw" and "the *eyes* of a potato". Comparisons are also used to

[1] Adopted from Tucker's book.

[2] The idiom is from Persian.

describe prominent qualities in human beings ;—a woman may be a *vixen* or in Gujarati she may be called a विंछण (female scorpion). So also we have the epithet इकोदर (wolf-bellied) applied to the voracious and savage Bhīma and a strong person is often called in Persian *pīl-tan* (elephant-bodied). Even proper names may have their connotation extended as in " a Daniel come to judgment " or in the phrase *Rustam i ān zamān* (a modern Rustam), or " the Shakespeare of Bengal ". The chief idea at the root of all such metaphorical speech is to explain the unfamiliar through the familiar.

### § 79. *Change in environment*: (i) *Geographical.*

We have already seen some instances of this when considering change in the meaning of borrowed words and in cognate words in different languages.[1] A few more examples may be added. The word उष्ट्र in Veda, at any rate in its earliest hymns, means a " buffalo ", or rather " bison ", owing to its colour. It was later transferred to the camel. This would be an indication that the tribes migrated from the land where the bison was found to the land of the camel. In modern times we see the varied use of the word *corn* which in England is a general term, while in America the word is used for " maize ", which is the staple diet of the aborigines. The names of trees and animals which are cognate in the various branches of the Indo-European languages show remarkable changes of meaning as the tribes migrated from place to place. Thus English *beech* and Lat. *fagus* are cognate and identical in meaning but the corresponding Greek *φηγο's* means " oak " and Kurdish *būz* means " elm ".[2]

[1] §§ 69 and 70 above.

[2] Schrader, *Reallexikon* (2nd ed.), I, p. 170.

### § 80. *Change in environment: (ii) Social.*

We have already seen how the same word may have different meanings where different trades are concerned.[1] Even words one might not have expected to change in meaning, like *father, mother, brother* and *sister*—may also change. The Catholics use all these words to indicate different orders of their religion. The word *Pope* was originally *papa* (father). In Greek φρατηρ (the same as Skt. भ्राता ) is used only for a clan-brother whereas the true blood-brother is ἀδελφός (lit., सगर्भः or सहोदरः).[2] In India the word भैया or भाई is used in both these senses and even more loosely. Men of the same village, or district, or even province, may be called भाई or भैया. In fact some people are so accustomed to this word that they would call any human being, even an utter stranger, भैया.[3] This is a characteristic word in the mouths of the people of Behar and so in the Western Provinces these Beharis are universally called भैया (or भैयाजी). They often call themselves *Purabiās* (or Easterners) and popular etymology has even corrupted that name to पुरभैया.[4] The word श्वशुर (father-in-law) and श्वश्रू (mother in-law) originally applied only to the *husband's* father and mother and that implied that the family organisation was patriarchal and that the newly-

[1] § 71 above.

[2] In English the double sense of *brother* is indicated in the two plurals, *brothers* and *brethren*.

[3] Cf. the vulgar use of *man* by the Anglo-Indians in India. Anybody and everybody can be called "man." I have actually heard Anglo-Indian girls addressing each other by this word.

[4] This case of भैया is strangely paralleled by the Chinese name for British soldiers, *Sezai* from their constant use of the phrase "Says I" (*The Problem of Grammar* by Prof. Allan Mawer, English Association Pamphlet No. 56, p. 11).

married bride had to find special names for the members of her husband's family who adopted her. In the *Ṛg-Veda* there are two passages in which the word श्वशुर (and श्वश्रू) are used from the man's point of view, i.e., meaning the wife's father and mother.[1] In Greek the corresponding words ἑκυρός and ἑκυρή were used similarly for the husband's parents. The corresponding word for the *wife's* father was πενθερός. Lithuanian and Albanian also show similar distinctions in these words. The husband is in most languages of India is called वर though he is seldom *chosen* by the bride.[2]

## § 81. *Change in environment : (iii) material.*

With the growth of material civilisation new changes come over words. Things were named after the material out of which they were made, and even if this latter changed entirely the old name continued. Thus *paper* was originally made out of *papyrus* pith and still bears the name though it is no longer made thus. *Pen* was originally a feather (Lat. *pinna*, a quill). But we have now steel-pens, gold-pens and even fountain-pens. In Bombay we call a steel-pen स्टील, from the material of which it is made, but we use पेन also. The queerest use among us of this latter word is in स्लेट-पेन, of which the fine soft variety is called मैदा-पेन.[3] *Volume* was originally a roll of paper, and even to-day there is a legal dignitary in England called the *Master of Rolls*. ग्रन्थ was originally a

[1] These are x. 28.1 and x. 34.3. In the first the speaker is said to be Indra.

[2] From वृ, to choose.

[3] मैदा is fine white flour (Hin. मयदा). The name is due to the fine powder that is left on the slate while writing.

set of palm-leaves tied up together (√यम्, to bind). A steamship even now is said *to sail*, and in Calcutta every office has *bearers* [1] who do not carry anything.

## § 82. *Politeness in addressing people.*

Politeness is a specially desirable quality to cultivate and most of the Indo-European languages have developed special forms of address, i.e., of the pronoun of the second person. English has entirely discarded the singular number of the second personal pronoun the idea being to use the " plural of respect ". But other languages of Europe and of India still preserve the singular number of the second person for intimate friends and near relations to imply affection. The use of the singular in addressing God indicates the भक्तवात्सल्य (affection of the devotee) of the worshipper. The plural pronoun in some of the languages shows a double form, one ordinary and one of respect. The latter is either a different pronoun, as the German *Sie* (originally the pronoun of the 3rd person feminine)[2] or the Italian *Ella* (originally the 3rd person feminine)[3]. In Indian languages we have आप as the polite form which is from *Skt.* आत्मन् (self). In Sanskrit the polite form of the pronoun is भवत् (present participle

[1] These were originally the palanquin-bearers, who also used to run errands and do other work. Exactly similar is the word हमाल (an Arabic word meaning " bearer ") used for the menial servants in Bombay offices. Skt. भृत्य also seems to have been originally " a bearer ".

[2] The second personal pronoun is distinguished by the initial letter being capital ; see Wright, *His. Ger. Gram.*, I, §§ 434 and 441.

[3] This peculiarity is due to the fact that in old days the phrase *Vos signoria* (your Lordship) was used for polite address. This being feminine, the feminine *Ella* was substituted later. Note that here too the initial is capital. The reason for Ger. *Sie* is exactly similar.

of भू-भव्) used in the plural.[1] The literal meaning is somewhat like "your presence", like the Urdu *huzūr*. Urdu uses also phrases like *gharīb-parwar* (protector of the poor), *bande-nawāz* (enricher of the slave) etc. Among Indian languages politeness in addressing is carried to the greatest lengths in Urdu. A man talks of his house as *gharīb-khānā* (poorhouse) and of that of the person addressed as *daulat-khānā* (rich mansion). So also the speaker speaks of himself as *arz-kartā* (making a request) but the person addressed "is commanding" (*farmāte hāe*). In Persian the pronoun of the second person plural is *shumā* (Skt. युष्मा-) and that is used in polite address, but the speaker talks of himself always as *bandeh* (servant). Also when speaking of a third person, when respect is to be indicated, the third person plural pronoun *īshān* (now pronounced *īshūn*) is used.[2] But the extreme of polite language is said to be reached by the Japanese. They are said to have an entirely different language for use in polite circles as distinct from the vulgar language.[3] "A number of objects and actions receive peculiar designations in the mouths of members of the Imperial Family and of those privileged to address them. Ordinary mortals can have no use for this exalted phraseology".[4] Thus "walking in ordinary language is *aruku* but the court expression is *o hiroi* (lit., honourably picking up), "blood" is *chi* ordinarily but *ase* (lit., perspiration)[5] for the higher people. The use of these

[1] The verb with this is in the 3rd person plural.

[2] Of course the verb used with this is in the plural.

[3] The lower classes in India, too, do not use polite forms among themselves, and often not even when talking to their betters.

[4] Chamberlain, *Handbook of Colloquial Japanese* (4th ed.), p. 241. See also his very interesting chapter on "Honorifics" (pp. 254-259).

[5] A very interesting reflection of the warrior spirit of Japan.

words, needing in many cases a different syntax, is very complex, and it takes foreigners a very long time to master these intricacies of the honorifics.

### § 83. *Euphemistic language.*

This may be due to various causes. There may be the desire to avoid using a bad word which might hurt another's feelings. The English word *silly* is originally "blessed";[1] a *plain* woman is really ugly. In India we call the scavenger महैतर (Skt. महत्तर, the greater one),[2] and cooks in North India are called महाराज (great king) and some servants in Bengal are styled ठाकुर (lord). Sometimes in Benares we hear a person called शीतलाकी स्वारी (the mount of Śitalā), a mild way of saying "donkey". Another reason for euphemistic phrases is to prepare the hearer for something unpleasant. Thus there are many and varied ways of speaking about death. In Sanskrit we have the phrases पंचत्वं गम् (to be reduced to the five elements) or कथाशेषतां गम् (to become only a memory).[3] Parsis use पुलगुजार (crossing the bridge)[4] or फुलवाडीमां जवुं (to go to the garden of flowers). The Avesta also speaks of the dead as *irista* (departed).[5] In Gujarati the phrase सनानना समाचार (the news for bathing) is used to mean "bad news" (usually that of death), because the Hindus need a purificatory bath after it. Parsis use the word खबर (news) in the sense of "bad news", specially news of

[1] Cf. Ger. *selig*.

[2] The Prince of Chitral is called the *Mehtar*.

[3] Lit., "a tale".

[4] Referring to the *Cinvat*-bridge where the good and the wicked are separated.

[5] The use of the word *ravan* for "corpse" may be due to this reason, viz., not using an unpleasant word.

death. Sometimes a useful substance is given a good name in spite of some unpleasant qualities, e.g., salt in Gujarati is called મીઠું (sweet). There is superstition underlying this practice. And indeed superstition accounts for a lot of words. Wives in some communities of India are forbidden to use the names of their husbands or even the word "husband". So they say in Gujarati એ (he) or the more polite plural, એઓ. Sometimes we hear the phrase કોકાના બાપા (the father of the boy). Husbands too use the pronoun એ or કોકાની મા (the mother of the boy). Often any disease or misfortune a man suffers is described as being suffered by his enemy— દુશ્મનને તાપ આવેકે (lit., his enemy is suffering from fever), and often the speaker takes it upon herself [1] એની મા (or બેન) બિમાર કે (lit., his mother (or sister) is ill).[2] There is a very queer word in Parsi-Gujarati, which was heard very often a couple of generations ago but is getting out of use, which has its origin in superstition. When a woman is prosperous and happy and another comes and complains to her of ill-usage and misfortune, the happy one thinks that unless the other is satisfied she may catch the evil herself. So the old Parsi women used to say to such envious persons લેતોજાનો પાલો બાંધ (apply a poultice of *letijā* herbs). Here the word લેતોજા means literally "take it away", i.e., remove your envious eye and if you like, take away some of our evil

[1] These words and phrases are mostly used by women.

[2] The various names given to children in India are often based on superstition. When several children have died the succeeding ones are given "bad" names so that the demons may pass him over as worthless. Such names are ઉકર (dung-heap), ફકીર (beggar), કચરો (sweepings), ચેલો (mad), તોનકોડો (worth three shells). When a man is "blessed" with a series of girls, in communities where girls are not wanted, we get some exceedingly queer names, such as સબર (stop !) or બારનાકાલી (no more, O Kali !).

too. It is owing to superstition too that the dread disease small-pox is called शीतला (the cool-one) or माता (mother) all over India.

## § 84. *Irony.*

Irony is responsible for the word किंकर (servant) in Sanskrit, for it seems to mean "what could he do?"[1] Parsis have a peculiar sense of humour and the Parsi-Gujarati dialect shows a good many examples of ironical words. One or two examples may suffice. A foolish person is called दोढचतुर or "too clever by half", literally "one-and-a-half clever"; or he may be called "an ocean of wisdom" (अकलनो समुदर). Under this head may also be mentioned paraphrases of names which may not be mentioned in polite conversation. तस्कर (thief) is literally "the doer of that"[2]—something unmentionable. So also the English words *unmentionables* for "trousers" and *hyphenated* for "damned". In the Victorian days prudery went to such an extent that no part of the body below the neck could be mentioned in polite conversation. And very funny paraphrases were made for the stomach or belly. I have come across *tummy*,[3] *little Mary*, *bread-basket*, and even *front of the back*. In Sanskrit erotic poetry (as also in other languages) many erotic words are rendered by clever paraphrases[4]. In Parsi-Gujarati the nose is often called फुलसुंघणु (the flower-smeller) especially when used metaphorically to mean "a sense of shame". A drink (especially a peg) is called

[1] It might be "one who does anything (or nothing)"!

[2] This is the way the word has been explained and it sounds quite plausible.

[3] A child's word for *stomach*.

[4] E.g., दैत्यगुरु: in the *Śṛngāratilaka* ascribed to Kālidāsa.

फोंटोपाणि (a drop of water)[1] or दे आंगल (two fingers), indicating the measure of the liquor in the glass. One such paraphrase used in ordinary Sanskrit is the word दिरेफ (bee) which stands for भमर which contains "two r's".

### § 85. *Emotional emphasis.*

There is in human beings a natural tendency to vivacity and exaggeration. But with some nations it is much more marked. Thus, comparing English and French we see quite clearly that the latter people are more lively and emotional and consequently their language is more vivid with regard to words expressing feelings and emotions.[2] But the very vividness of expression leads to unconscious exaggeration. Thus the French people use words like *affreux, horrible, terrible* very often, in fact so often that the words have become almost meaningless. In certain strata of the English people such words as *awful, terrible, dreadful* are also very frequent. We talk of a "dreadfully funny story" or "an awfully nice man" and we also say "thanks awfully".[3] In all these phrases the adverb is used to indicate merely "very" or "very much". In India the words भयंकर, भयानक, प्रचण्ड, etc., are used similarly, especially in colloquial Bengali.[4]

[1] Cf. "a wee drappie" of the Scotch.

[2] We could realise this clearly if we compare the meanings of the same word in English and in French; e.g., *spirituel* in French is "lively" or "vivacious", quite different from *spiritual*.

[3] The language of the modern aristocratic young people in England is clearly tending in this direction. This can be seen very clearly in the stories of P. G. Wodehouse.

[4] In the same category we must put the nasty habit found among people of all lands of freely scattering "swear words" all over their conversation. In such cases these words lose all their sting. Of course an occasional use of a good sound *damn* or a kindred word is a relief to pent-up emotion, and does not necessarily mean any moral depravity.

### § 86. *Prevailing use of one type out of a class.*

Familiarity with one type out of a class would naturally lead to the name of that type being used as a general term to indicate the whole class. Among animals especially the name of one sex alone is used to indicate the class, e.g., *dog, horse.* The Sanskrit गौः (cow) is masculine but the derivative गाय (गैया) is feminine in the Indian vernaculars because the cow (not the bull) is the more familiar animal.[1] Similarly in English is the word *cow* more familiar. रुपिया (rupees)[2] is often used to mean "riches", which consist of many things besides mere silver coins. सियाही[3] (Bengali काली) was originally (as the name indicates) "black fluid", but is used to mean "ink" generally. It can be qualified to indicate the colour as in लाल सियाही. So also the Urdu word *sabzi* originally "green vegetables"[4] is used as a generic name for all vegetables.

### § 87. *Laxity in the use of words due to ignorance or misapprehension.*

When this happens "occasionally" we call it contamination and give it the name of "malapropism".[5] But very often such usage persists and becomes "usual" in a language giving a permanently new signification to the word. Of course learned men and purists in style do not commit

[1] महिषः (buffalo) is mas. in Skt., but the derivative भैंस (भैंस) is fem. in the vernacular for the same reason.

[2] The word itself literally means "silver", from Skt. रूपक.

[3] From Pers. *siyāh*, "black".

[4] Cf. Eng. "greens".

[5] See § 65 above.

such errors but ordinary people trying to use fine-sounding words from learned languages cause these confusions. Instances may be quoted from almost any language. In English we have the word *dilapidated*, which could only apply to a stone structure,[1] but we now speak of almost anything as dilapidated, even chairs. *Miscreant* is originally "misbelieving", and hence "wicked" (to blind bigots). A similar history attaches to the Gujarati पाखण्ड which means "roguery", but which is originally from Skt. पाषण्ड, a term applied to a sect of ascetics in the days of Aśoka who were honoured by him.[2] In later days the word came to mean "unbeliever", which meaning the word still retains in Hindi. Among Indian Vernaculars such confusions of Sanskrit or Persian-Arabic words are fairly common. विवेक in Skt. means "discrimination" but in Gujarati it means "good manners" and in Bengali "conscience"; स्थावरजंगम in Skt. means "things moving and non-moving",[3] in Gujarati it is used for property "real and personal"; धन्यवाद is in Skt. "word of praise", but is now used to mean "thanks" in most vernaculars. Often this misunderstanding and confusion leads to a change of spelling based on false etymology by ignorant people. In Gujarati the word for "correct" or "reasonable" is spelt व्याजबी [4] whereas the correct word is वाजबी (Pers. *wājib*, proper, expedient).

[1] The word is from Lat. *lapis*, stone.

[2] Found in three edicts of Aśoka as पाषंड or प्रषंड. The Skt. form is through the Prak. The origin of the word is uncertain. See Woolner, *Aśoka Inscriptions*, Glossary.

[3] Referring mainly to "the living and non-living".

[4] Were the framers of this spelling thinking of the proper rate of interest (व्याज)?

Another word utterly misunderstood is मायाकुल[1] used in the sense of "being in agreement", i.e., "fit and proper". The word has nothing to do with माया (kindness),[2] but is from the Arabic *m'aqūl* a derivative of *'aql* (understanding) and means "discerning", hence "agreeable". The word असुर meant originally the Deity (lit., the Lord of life, असु), but later on it was misunderstood and the initial अ- was taken to be the negative prefix and a new word सुर was coined to mean "god" and असुर came to have the meaning "demon".

§ 88. *Indefiniteness of meaning in the words themselves.*

In all languages there are a certain number of words which are rather vague in sense. Tucker has put it nicely: "a word is a coin or token of language; a speaker may intend his token to represent sixpence, while to the listener its current value may either be only fourpence or it may be ninepence"[3]. Thus the words *gentleman* and *lady* are what might be termed "delightfully vague" and may signify almost every grade of politeness and culture. In India the word आर्य is become such a vague word, though at one time it was sharply defined. Similarly in modern times words like द्विवेदी, चतुर्वेदी (in Hindi दूबे and चौबे) have become mere surnames. शेठ (from श्रेष्ठ), once applied to the highest and most respected person in a town,[4] is become a mere empty

[1] Good dictionaries do not give it in this form but in the correct form, माकुल.

[2] The phrase a आपनो माकुल पत्र almost means "your kind letter", hence probably the confusion.

[3] Op. cit., p. 373.

[4] As in the Gujarati नगरशेठ who was the highest civic authority in a city, something like Lord Mayor.

designation and in Calcutta it is applied to any man from Bombay. The word *Chetti* in Madras is the same word and has had the same history. The word *native*, used once in the proper sense of the people indigenous to a land, gradually become vague and was applied indiscriminately to all those whom Europeans regarded as "backward" or primitive people. Naturally the people of India resented deeply the use of this word. And the British Government have very wisely abolished it "officially".[1] High sounding titles in every land have become degraded and meaningless until sensible modern nations have abolished them altogether.[2] In English the *Esq.* used in addressing letters was originally a distinct step upwards on the social ladder.

### § 89. *Differences between individual conceptions of a word.*

Closely connected with the previous cause of meaning change is the different manner in which different minds understand a word. This is especially true of moral and intellectual ideas; *good*, *wrong*, *right*, *holiness*, etc., have infinite gradations of meaning. The word धर्म among Hindus had a most exalted signification once, but now it means a body of complicated ceremonial. Similarly अशोइ among the Parsis (Avesta *aśa*), *islām* among the Mahomedans and *righteousness*[3] among the Christians have all become degraded in the mouths of the modern followers of the faith. Whatever the etymological sense

[1] A very queer use of the word *natives* in colloquial English is in the sense of "oysters" (natives of the sea ?).

[2] Canada and Persia are among the latest such.

[3] In the Greek Testament the original is *Δικη*.

(and all these words have existed long before these religions were founded) the teachers of religions have always exalted these words, and have used them in the most spiritual sense they are capable of bearing. Their followers later on have slowly brought these words down to lower levels. This is true in the history of every religion. The fullest and the most spiritual meanings of such words are to be found in the words of the original Teachers themselves, even though before their time these may not have had this exalted sense. There are many other words which have grown vague owing to the varied ideas of individuals. A person may say "I *like* fruit" and "I *like* this man", and none would assert that the word *like* means the same in both. In such vague words very often the tone or emphasis means a great deal [1].

### § 90. *Predominance of one element in the word.*

*Gas* as ordinarily used means one particular kind which is used for lighting or as fuel. There are many gases known, but they are hardly of interest to anybody who is not a chemist. This sort of predominance of one element or one type leads in most cases to a narrowing of meaning. Several instances have already been given ; [2] a few more may be added. In nicknames given to people of a certain class one particular characteristic is emphasised, e.g., *red-coats*,[3] *blue-jackets*, etc. In Bombay Highland regiments are known as घाघरा रिजमिट (petticoat-regiment) and Parsi priests are called सफेद पाघडी (white-turban) owing to their distinctive dress. The word *bāi*

[1] See Ogden, *A.B.C. of Psychology*, for many such instances in our daily talk.

[2] § 74 above.

[3] Cf. the well-known phrase "the thin red line".

in Persian means merely "smell", but it came to be used for nice and pleasant smell, and the Parsi Gujarati बोय means "incense", and बोय दैवी (to offer incense) is used in the very special sense of offering incense at fixed hours to the sacred Fire in Parsi temples. गुडाक is a Sanskrit word meaning "sleep" or "sloth",[1] and गुडाकु in the Vernaculars means a particular narcotic mixture. In Bombay most of the bakers are Goanese and in the early days their street-cry was घे पाउ[2] (buy bread), and these bakers were called गोपाउ. Then the word was extended to include all people of Goa (in fact all Anglo-Indians), whether bakers or not.

§ *91. Unconscious inclusion of a secondary meaning.*

This results usually in a transference of meaning. Of this type, too, several words have been noted. A good word with a very varied history is *Hind* (or *Hindu*). This is of course the Iranian form of the word सिन्धु (a large river). The name was transferred pretty early to the land itself through which the Sindhu flowed.[3] Henceforth *Hind* was the land and *Hindu* the people. Then in Persian the words came to acquire some very special meanings. The science of geometry was called *hindsah*. *Hind* also meant black ;[4] and because Hindus were

[1] Hence गुडाकेश (he who hath overcome sleep), a name of Arjuna.

[2] घे is Marathi for "take" or "buy"; and पाउ is Portuguese *pão* (Lat. *panis*), bread.

[3] The earliest mention of the land *Hind* is found in the Behistum Inscription of Darius the Great.

[4] As in the famous line of Hāfiz :

*ba khāle hind mi-bakhsham*
*Samarkand u Bokhārā-ra*

"For the black mole (on her cheek) I would bestow Samarkand and Bokhara".

carried off in large numbers to be sold as slaves by the early Moslem conquerors, the word *hindu* came to mean a "slave". There were two special products of *Sindh* province, horses and salt; and hence सैन्धव means both these. In borrowed words very often a particular sense alone is to be seen. The English word *curtain* was borrowed in Gujarati and became કરતિન, and because curtains were principally used round beds the Gujarati word is confined only to "bed curtains".

### § 92. *Difficulty of accurately classifying the reasons for semantic change.*

In many of the instances given above the reasons which led to the change of meaning are mixed up,—partly one and partly another. In some cases one reason seems to operate at first and another at another time. It would also be seen that we cannot draw sharp lines of demarcation between the various types suggested. The human mind works in devious and varied ways and the path that has been followed in a particular case may be fairly complex. Sufficient, however, has been stated above to prove that this is really a most fascinating branch of linguistics and that it throws much light on the varied experiences of the human race in different lands, because Semantics deals with the *human* aspect of language.

# CHAPTER VII.

## The Production and Classification of Sounds.

### § 93. *Phonology, Morphology and Syntax.*

So far we have been considering human speech as far as it is affected by the mind. That is surely the most important aspect of speech. It is only comparatively recently that this side of Linguistics has been approached at all adequately. Even to-day many of the books deal with the details of the structure of language as regards the sounds and forms. The part dealing with sounds is called Phonology, and the part dealing with word-building is called Morphology. Both these, sounds and words, make up as it were the *body* of human speech. Syntax shows how these words are to be put together, how this body is to be worked. Syntax deals with the *life* of language. The study of bones and muscles is useful and indeed essential, but it must always be subordinate to the life influence working upon it. Hence it is necessary to consider word-building and syntax together as being closely connected.

### § 94. *The importance of Phonology.*

But though syntax is the most important aspect of language, still the science of sound is usually taught first in text-books.[1] Phonetic principles are now being studied very scientifically and accurately for the various languages of the world, especially for those of Europe.[2] Each of the

[1] I have departed from this plan, because I deliberately wish to emphasise the fact that linguistics is something more than a mere collection of "phonetic equations".

[2] In England the most valuable work on Phonetics has been done by Prof. Daniel Jones of London.

innumerable sounds of human speech is carefully analysed and a very elaborate system of transcribing these sounds has been devised by which each of these sounds can be represented by one single symbol which is clear and distinct. This system is the *International Phonetic Script* which is much more perfect and far more satisfactory than others invented earlier. The invention and the perfecting of the gramophone of late years has also been of immense service in the study of Phonetics. Gramophone records of many languages and of most of the dialects of Europe have been taken and these enable students to investigate very thoroughly, and at their leisure, the accent and intonation of any particular language. One great advantage of these records is that the sounds recorded there can be reproduced as slowly as desired and thus all the intermediate shades of sound may be clearly understood.[1]

### § 95. *Production of human speech.*

As far as human speech sounds are concerned we know that only a few kinds of birds can reproduce them, though every mammal[2] and bird can produce some sort of sound. The main difference in the organs for the production of sound between these and human beings (and the few birds like the parrot, the myna and the cockatoo) lies in the shape and position of the tongue. In human beings the vocal apparatus is confined within a small compass—the mouth and nose cavities and the larynx. The apparatus is worked by means of the breath going in and out of the lungs. In most cases it is the out-going

[1] A complete set of dialect records in French and German have been compiled and English records are being also made. A gramophone Linguistic Survey of India is very much to be desired.

[2] Except the giraffe, which posseses no vocal chords.

breath that operates, but there are sounds in human speech which accompany the intake of breath.[1]

### § 96. *The larynx and the vocal chords.*

In the throat, in the region of what is popularly called "Adam's apple", there is a slight bulging in the wind-pipe. This is the *larynx* and in this place the chief vocal mechanism is situated. It consists of two thin but strong elastic bands joined in the front but not at the back. These are called that *vocal-chords*. During ordinary breathing these two remain separated, thus leaving an opening like a ∧ through which the breath could pass unhindered. These are joined together in the front, and

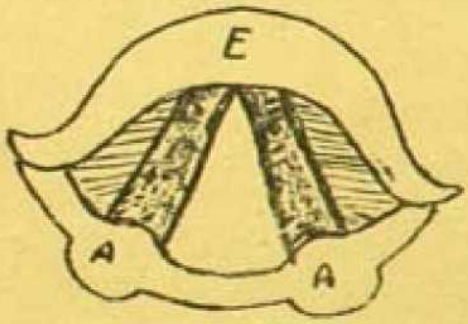



Fig. 1

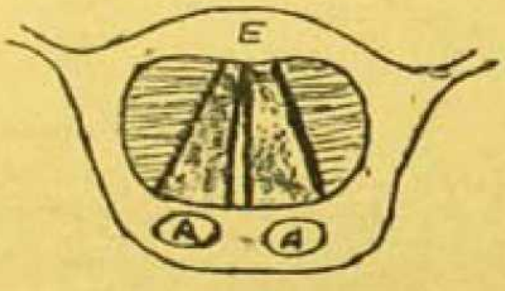



Fig. 2

The vocal chords open (left), and closed (right).
The dark shaded parts are the vocal chords, those shaded horizontally are the so-called "false vocal-chords"; E. Epiglottis, A. Arytenoid gristle.

at the back their ends are joined to two lumps of gristle (A-A in Fig. 2) which are called "arytenoid". These two can be brought as close as possible. When this is done,

[1] These are called "inverse sounds". There are in Sindhi such peculiar sounds which are voiced and which may be called, "inversely aspirated". Thus there are three voiced sounds in each class besides the nasal. Turner has described them in a paper entitled: "The Sindhi Recursives or Voiced Stops preceded

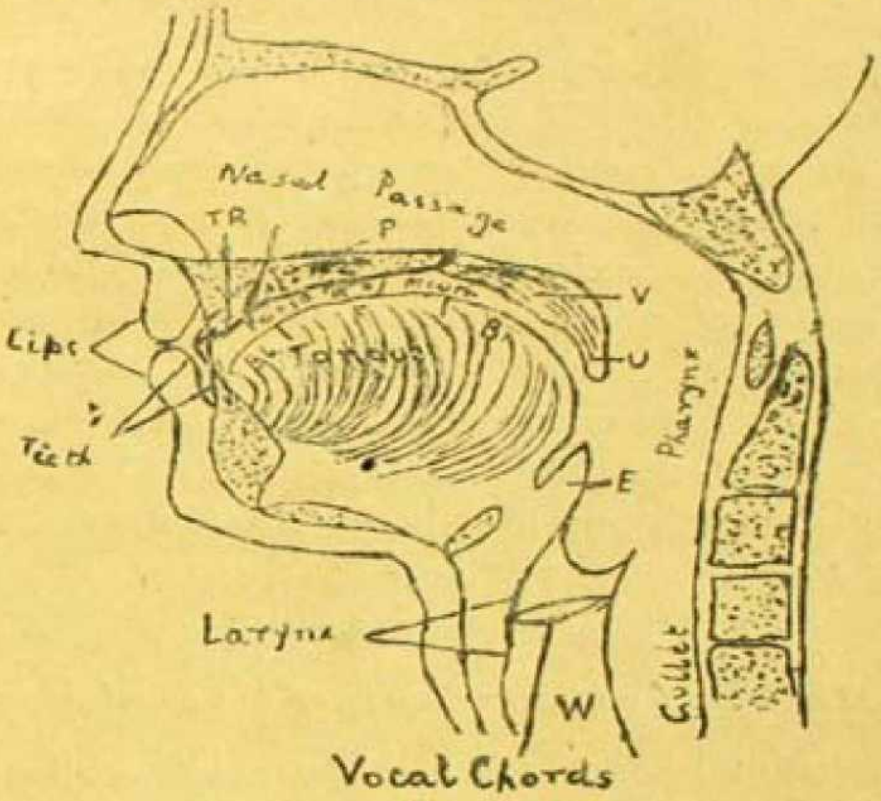



FIG. 2

Vocal mechanism in man.

[Explanation (with Skt. equivalents)].[1]

W. Windpipe or trachæa —श्वासमार्ग:

Larynx—कण्ठनाल:

Vocal chord—घोषतंत्री

E. Epiglottis—उपजिह्वा

Gullet—गल:.

Pharynx—गलमुखम् or कण्ठायम्.

Tongue—जिह्वा, divided into :

Bl. Blade (including the tip)—जिह्वाग्रम्

F. Front—जिह्वापृष्ठम्

B. Back—जिह्वामूलम्

Teeth—दन्ता:

Lips—ओष्ठौ

Palate (roof of the mouth) तालु divided into :

TR. Teeth-ridges—दन्तमूलम्,

P. Hard Palate—कठिनतालु or तालव्यम् (divided by Skt. phoneticians into तालु and मूर्धन्[2]),

V. Velum of Soft Palate —स्निग्धतालु or तालपृष्ठम्,

U. Uvula—युष्किका or अलिजिह्वा.

Nasal passage—नासिका.

Passage of Mouth—मुख-विवरम्.

[1] Some of these are tentative suggestions.

[2] Skt. phoneticians have divided the low palate into two—the front and the top part (the highest part of the roof of the mouth) because of the two classes of sounds produced.

the breath passage is either completely stopped [1] or there is a narrow slit left. When the slit is not sufficiently narrow, the breath coming through just rubs against the elastic bands—the vocal chords—and we hear what is called a *breathing* or a *whisper*.[2] But when the slit is quite narrow the breath rushing out causes the vocal chords to vibrate and this vibration is heard as a distinct sound. The vibration of the vocal chords can be felt clearly by the finger placed upon the "Adam's apple". This vibration (and hence the audibility) thus imparted to the outgoing breath is technically called the *voice* or घोष.

§ 97. *The mouth and other parts of the vocal apparatus.*[3]

Just behind the wind-pipe is the œsophagus or gullet through which food passes. There is a small projecting process just behind and below the tongue called the *epiglottis* and when food is swallowed it drops down upon and covers the entrance to the larynx. The wide common opening of both the larynx and the gullet is called the *pharynx*. The pharynx opens into the mouth and the nasal cavity. In the mouth there are (*a*) the teeth, (*b*) two flexible lips and (*c*) a very mobile tongue. The tongue is a mass of muscle which can be made to move in any desired position and touch any part of the upper jaw. The tongue is divided into three divisions the *blade*, the

by glottal closure". They are also called "implosives" -as distinguished from "explosives". These sounds seem to be developing in certain Gujarati words like બ્હેન (sister), where the aspirate, as pronounced usually, is clearly an intake.

[1] Technically called "glottal closure". There is a slight "click" heard when this occurs. This is the sound of the Arabic *hamzat-ul qat'i*.

[2] महाप्राणः.

[3] See Fig. 1.

*front* and the *back*. The roof of the mouth or the palate is divided into (*i*) the *teeth-ridge*, (*ii*) the *hard-palate*, (*iii*) the *soft-palate* or *velum* and (*iv*) the *uvula*. The last named serves often to shut off access to the nasal cavity.

### § 98. *Obstruction in the larynx : voiced and voiceless sounds.*

We have already seen that the outgoing-breath may be obstructed in the larynx and thus get "voiced". The breath may pass through the larynx without the vocal chords being brought closer ; but in order that it may give rise to an audible speech-sound it must meet with an obstruction elsewhere and that can only be in the mouth. Or again the breath may be obstructed *both* in the larynx and the mouth.[1] So the fundamental point of distinction is whether there is or is not obstruction in the larynx, in other words, the fundamental division of sounds is into *voiced* or घोष and *unvoiced* or अघोष.[2]

### § 99. *Obstruction in the mouth, (i) partial : Spirants.*

The second obstruction is to be in the mouth. Here we get the various "classes"[3] of sounds according to the point at which the obstruction occurs. This obstruction may be (*i*) partial or (*ii*) complete. In the former case what happens is that the breath-stream rushes through a

[1] Of course if there is no obstruction in either place there can be no sound.

[2] Sometimes called *mediae* and *tenues*, or *sonant* and *surd*, or *soft* and *hard*, respectively.

[3] The five *vargas* of Sanskrit sounds.

narrow[1] slit or opening at the point of obstruction and thus rubbing against the obstruction a "hissing" sound is produced (see Fig. 3). These sounds are called *spirants* or *sibilants* or *fricatives.*[2] One special characteristic of these sounds is that they are *continuant* [3], i.e., they can be drawn out and can be pronounced without the help of any vowel whatever.[4] The sounds स् (*s*), श् (*ś*), ष् (*ṣ*) in Skt. are of this type. These are unvoiced and are called ऊष्म sounds (lit. breath sounds)[5] in Sanskrit. There are voiced spirants too, as in Persian ز (*z*) and ژ (*ž*) which

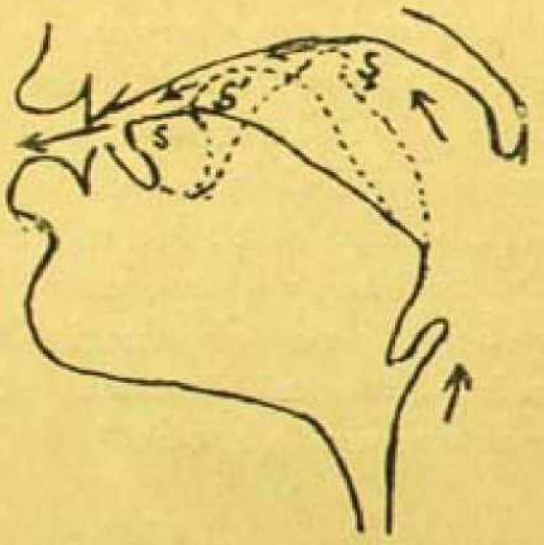


Fig. 3.

correspond to ص (*s*, स्) and ش (*ś* श्) respectively but they are not used in Sanskrit. English has both these

[1] In order that the sound be properly heard the slit must be narrow.

[2] *Spirant* means "breath sound", *sibilant* means "hissing sound" and *fricative* is "friction-sound".

[3] The name is given to a class of sounds of which the spirants form a part.

[4] So the definition that a consonant "is a sound which cannot be pronounced by itself" is not quite accurate.

[5] ऊष्मन् means "breath" or "vapour".

sounds as heard in *zero* and *pleasure*.[1] There are two other spirants recognised in Sanskrit, though there are no separate signs for them, being both represented by the *visarga*. The first is the velar-spirant (see Fig. 6) called the जिह्वामूलीय (*jihvāmūlīya*) which is hard in the word अन्तःकरण (*antaḥkaraṇa*). The second is the labial-spirant (see Fig. 10) called the उपध्मानीय (*upadhyānīya*) which is heard in अन्तःपुर (*antaḥpura*).

•

§*100. Obstruction in the mouth, (ii) complete : Explosives.*

The obstruction may be complete, i.e., no slit may be left out of which the breath could issue. This means a complete stoppage for a moment and it is only when the obstruction is removed that the sound is heard. The release of the obstruction sounds like an explosion. The breath imprisoned behind the obstruction comes out all at once. Hence these sounds are called *explosives*.[2] They are also called *mutes*, because they are mute (inaudible) while the obstruction lasts. There is yet another name for these—*stops*, which is given to them because the breath is stopped by the obstruction. In Sanskrit they are called स्पर्श sounds (lit. contact-sounds), referring to the " contact " or " stop " or " obstruction ". These " contacts " can occur in any part of the mouth and theoretically there would be an infinite variety of these possible. In the Indo-Aryan languages we have kept up the old Sanskrit sounds very nearly the same as in ancient

[1] The difference can be clearly perceived if we put a finger lightly on the " Adam's apple" and say *s s s*... and then change to *z z z*.... It will be observed that the tongue retains the same position, but in the latter case the vocal chords can be very clearly felt vibrating.

[2] Sometimes shortened to *plosives*.

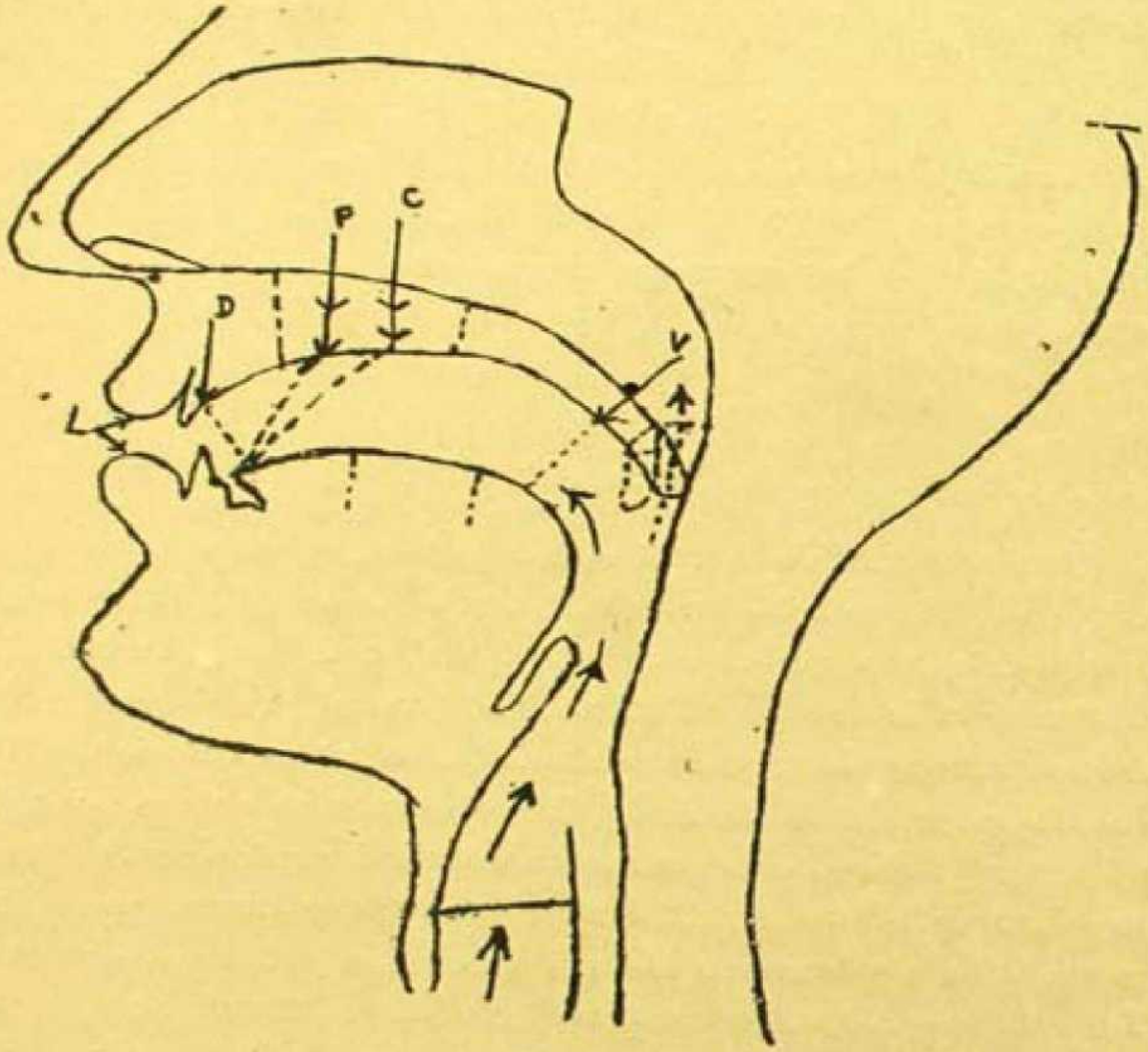



Fig. 4.

The five "points of contact" (स्पर्शस्थानानि) in Sanskrit.

Explanation :

V. Velar—कण्ठ्य
P. Palatal—तालव्य
C. Cacuminal or Cerebral—मूर्धन्य
D. Dental— दन्त्य
L. Labial—ओष्ठ्य

days[1] and they are divided into five "classes" according to the point of contact. Figure 4 shows these points of contact.

The double arrows are "derivative" classes. The single ones show the "primary" classes. The dotted lines connecting the "points of contact" with tongue indicate the part of the tongue which makes the contact.[2] The line of arrows issuing from the larynx shows the path of the breath. The dotted position of the uvula shows its position when nasals are pronounced and the dotted arrow the corresponding path of the breath.

### § 101. *The variations found in each class.*

At each of these points of contact the sound may be varied. We have already seen that the contact may be partial (ईषत्स्पर्श) or full (पूर्णस्पर्श); and then under each head there may be unvoiced sounds or voiced sounds.

Thus we get four varieties: (*i*) unvoiced spirants, (*ii*) voiced spirants, (*iii*) unvoiced stops and (*iv*) voiced stops. In Sanskrit, and to a certain extent in Greek also, there was a further variation of the stops. This is caused by the addition of a breath (or whisper) to the stop; following without any appreciable interval. This addition of the breath is called *aspiration*. The stops would thus be *unaspirate* (अल्पप्राण) or *aspirate* (महाप्राण).[3] Then there is the

[1] They are best preserved in Marathi. Hence the Maratha pronunciation of Sanskrit is the purest and clearest.

[2] The actual contact of each class is shown in the succeeding figure (6-10).

[3] In Greek only the unvoiced stops can be aspirate, the voiced lack the aspirated variety. So there are only χ, θ and φ but not *gh*, *dh* and *bh*.

nasal. In all the sounds considered so far the uvula presses back against the pharynx closing the nasal passage, so that all the breath passes out through the mouth.[1] But when the contact is made in the mouth and at the moment of releasing the contact the breath is emitted through the nose we get the *nasal* (Fig. 5). The contact is made in the mouth and as the breath comes through the nose where

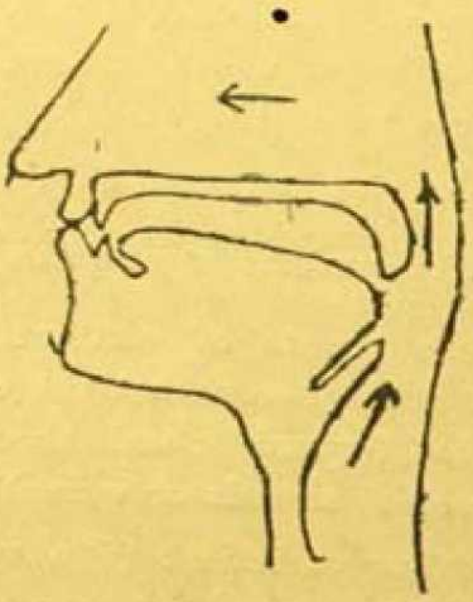


Fig. 5. Nasal (*m*).

there is no chance of obstruction,[2] no sound would be heard unless there is voice attached. So all nasals are necessarily voiced. Thus we get altogether seven clear varieties of sound possible for each class. Of these Sanskrit possesses all except the voiced spirants.

[1] The nasal twang of modern American English is due to an incomplete closing of the nasal passage.

[2] Unless through a cold the passage is blocked in which case the breath perforce comes out through the open mouth and the sound becomes the voiced unaspirate with a slight nasal twang.

§ *102. The five classes of contact sounds in Sanskrit.*

In Sanskrit the five classes are well-known and they are arranged in regular order. Of these five, two are what may be called "derivative" or "secondary" classes and three are "primary," viz., the *k*-, the *t*- and the *p*-classes. The derivatives from the first two are the *c*-class and the *ṭ*-class respectively. The positions in producing these are seen clearly in the figures below:

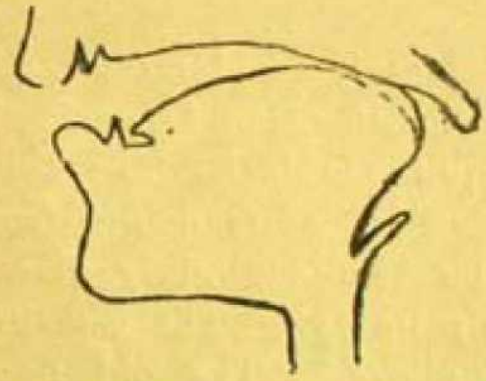


Fig. 6. Velars—कवर्ग: (The dotted line shows the position for the spirant.)

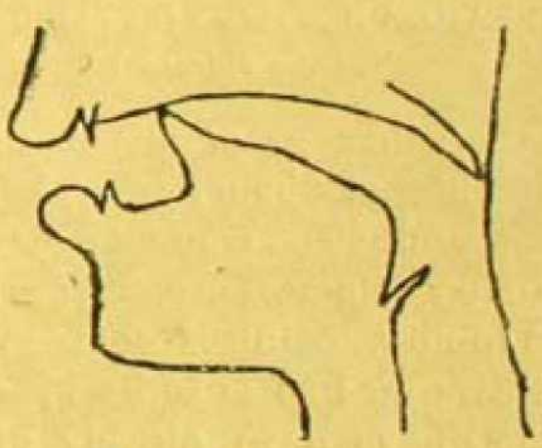


Fig. 7. Palatals—चवर्ग:

Fig. 8. Cacuminals—टवर्ग:

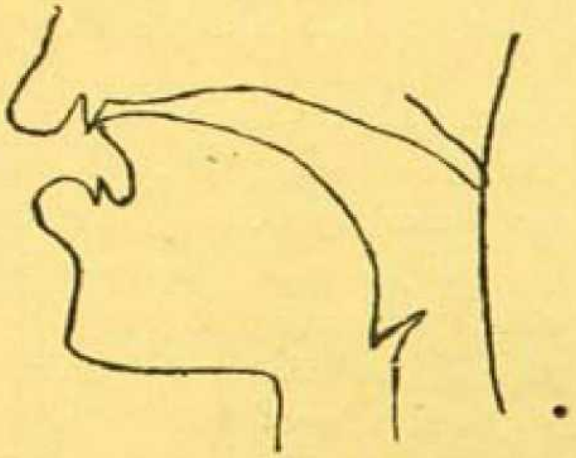


FIG. 9. Dentals—तवर्ग:
(The dotted line shows the position for the spirant.)

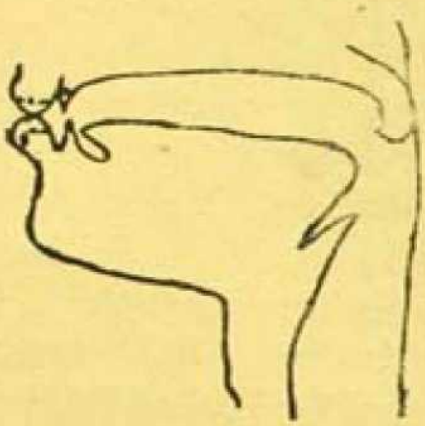


FIG. 10. Labials—पवर्ग:

Sanskrit grammarians have clearly understood the principles of phonetics and their classification is perfectly clear and the arrangement is quite logical. The three primary classes are arranged in order commencing from the inmost point of contact. The two secondary classes are arranged so as to be near the primary.[1] The Sanskrit names have been already given above.[2] The old name "guttural" given to the क-class is less scientific than the modern "velar." So also the older term for ट-class, "lingual", was later replaced by "cerebral", a literal translation of the Skt. मूर्धन्य. The name used now-a-days is *cacuminal* or *retroflex*.[3]

[1] One would have expected the ट-class to *follow* the dentals. The influence of the Dravidian sounds probably caused the change of order. It is remarkable that in the Brāhmī alphabet dental letters are the derivative, and cerebrals are the primary forms.

[2] Explanation of Fig. 4.

[3] The theoretical position of these sounds is a point somewhere near the junction of the soft and hard palates. The tongue is rolled backwards in these, hence the name *retroflex*. *Cacuminal* means belonging to the summit or top (Lat. *cacumen*, peak, summit, Skt. ककुद्).

| Class | Stops | | | | | Continuants |
|---|---|---|---|---|---|---|
| | Full contact | | | | | Partial contact |
| | Oral (through mouth) | | | | Nasal | Spirant |
| | Voiceless | | Voiced | | | Voiceless only |
| | Unasp. | Aspirated | Unasp. | Aspirated | | |
| Velar—कण्ठ्य ( क-वर्ग ; *k*-class ) | क् k | ख् kh | ग् g | घ् gh | ङ् ṅ | : (-ḥ) Jihvāmūlīya |
| Palatal—तालव्य ( च-वर्ग ; *c*-class ) | च् c | छ् ch | ज् j | झ् jh | ञ् ñ | श् ś |
| Cacuminal—मूर्धन्य ( ट-वर्ग ; *ṭ*-class ) | ट् ṭ | ठ् ṭh | ड् ḍ | ढ् ḍh | ण् ṇ | ष् ṣ |
| Dental—दन्त्य ( त-वर्ग ; *t*-class ) | त् t | थ् th | द् d | ध् dh | न् n | स् s |
| Labial—ओष्ठ ( प-वर्ग ; *p*-class ) | प् p | फ् ph | ब् b | भ् bh | म् m | : (-ḥ) Upadhmānīya |

Table of Contact-sounds and Spirants in Sanskrit.

### § 103. *The vowel sounds.*

The sounds we have been considering so far are the "consonants". The usual definition given of consonants is not accurate, as we have already seen above;[1] a truer definition is that they are "contact-sounds", the contact being either partial or complete.[2] With vowels, however, *there is no contact whatever.* This is the chief characteristics of vowels. And since there is no contact or obstruction in the mouth, therefore, in order that the vowel be heard at all, it *must* be voiced, i.e., should have the obstruction in the larynx. The simplest vowel is uttered by the mouth being wide open, the tongue lying low down and the breath coming through between the vibrating vocal chords. It is the vowel *a* (অ).[3]

### § 104. *Classification of vowels*: (*i*) *Quantity.*

Vowel sounds may be classified in two ways: (*i*) according to *quantity* and (*ii*) according to *quality.* The former depends upon the *time* taken to utter them in speech.[4] Usually the time is reckoned in terms of one *mora* (মাত্রা) which is the time taken for a *short* vowel. On this basis we get two kinds of vowels: *short* vowels, needing *one* mora, and *long* vowels needing *two* moræ. Sanskrit Grammarians have recognised also an *extra-long*

[1] § 99 above, footnote.

[2] Some scientists have maintained that animal sounds are mostly vowel-sounds, for their tongues are usually not capable of making contacts. Only a few birds possessing tongues shaped like the human tongue can imitate human speech sounds.

[3] I have on purpose not adopted the usual transcription *ā* here for অ. The reason would be plain a little further on when dealing with "mixed-vowels" (§ 108).

[4] Note the words "in speech". In music a vowel may be drawn out quite a long time, and the smaller divisions, various fractions, ½, ¼, ⅛, etc., of one *mora* of time are also recognised.

( प्लुत ) vowel of *three* moræ,[1] where the length is indicated by the figure 3, as ३. This is found, for instance, in the long drawing out of the final syllable in calling a person from a distance, e. g., देवदत्त३ आगच्छ. In modern linguistics there is sometimes an extra-short vowel also recognised which serves as a help in pronouncing an otherwise difficult combination of consonants.[2] Its duration in time is half a mora or अर्धमात्रा. It generally is of the same quality as the following vowel. It is heard, for instance, in the pronunciation of the English name *Goldsmith*, as heard in many parts of India. The combination—*ldsm*—presents difficulties and so an extra-short *i* is inserted, and the word sounds as *Gold*ⁱ*smith*.[3]

## § 105. *Classification of vowels* : (ii) *Quality*.

The more important classification of vowels is according to *quality*, or variation in the nature of the vowel itself. The nature of the vowel varies with the size and shape of the mouth-opening.[4]

The fundamental vowel is *a* अ ; and starting from that position we may make the mouth opening smaller, at the same time raising the *front* of the tongue

[1] Pāṇ. 1.2.27. See *Siddhānta Kaumudī* (Vasu's edition), p. 5.

[2] In the I.-E. parent language such a vowel is postulated (in fact it is thought to be of two kinds). It is usually represented there by the phonetic symbol ə and it is called *Schwa* ( *primum* or *secundum*). Its name is from the shortest vowel found in Hebrew. I prefer to call it the " *ardha-mātrā* vowel " or more shortly the *ardha-mātrā*.

[3] In English there is no vowel sound introduced, but a distinct hiatus (stoppage of sound) is felt lasting over about half a mora.

[4] This can be easily perceived by opening the mouth wide and uttering the vowel *ā*, at the same time rapidly moving the palm of the hand to and fro in front of it. The vowel is heard distinctly to change.

higher and higher. This gives us the *front-vowels*. Similarly by a gradual shutting of the mouth accompanied by the gradual raising of the *back* of the tongue and a rounding of the lips we get the set of *back-vowels*. In between there is a set of what may be called *mixed-vowels*. There is necessarily an infinite gradation possible in each of these three series but individual languages only recognize a few standard types from each series. In the front series the highest position is of *i* and among the back-vowels the highest position is that of the *u*. If we make out the highest points of the tongue for each of these *i* and *u* as also that of *a*, the fundamental vowel, we get an inverted triangle which is called the *Vowel-Triangle* [1] (Figures 11 and 12).

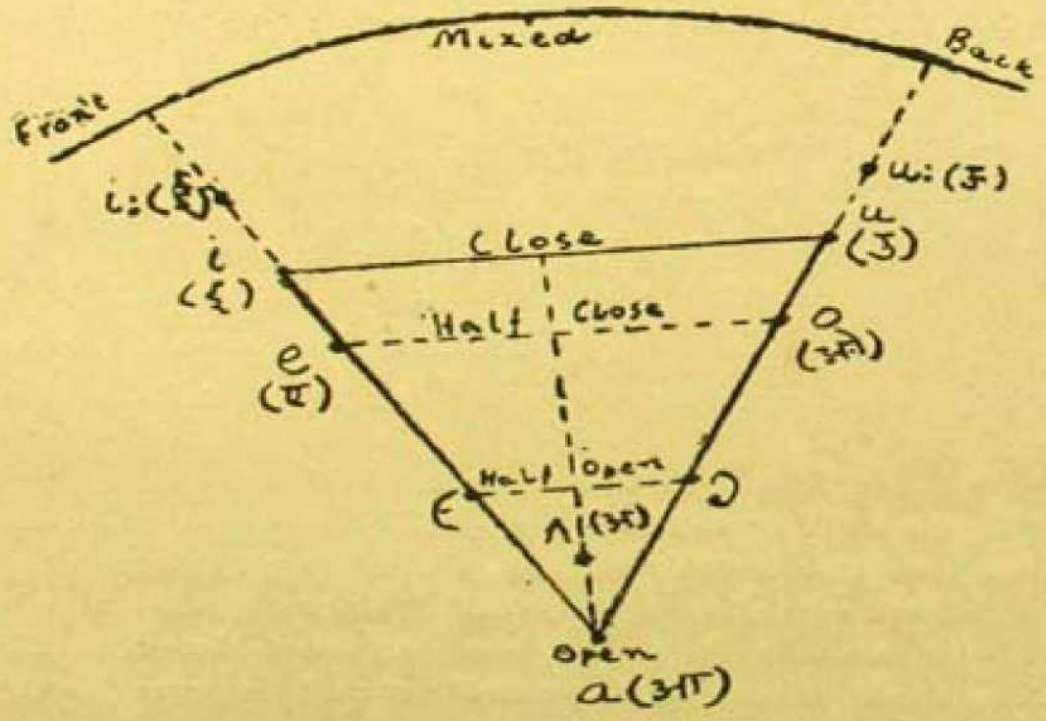



FIG. 11.

The Vowel-Triangle (for Sanskrit sounds).[2]

[1] Daniel Jones, *English Phonetics*, § 75. The figure is adapted from his book.

[2] Note that all the sounds marked here are *simple* sounds (i. e., not diphthongs) and that *all* of them are different *in quality*. The seeming discrepancies will be explained further on.

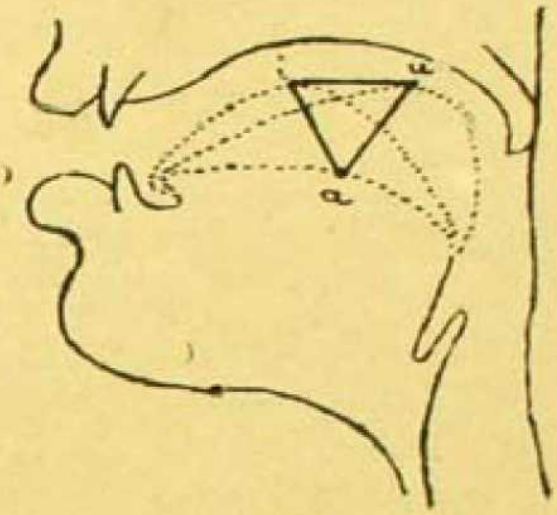



FIG. 12.

The Vowel-Triangle (inside the mouth).

With the mixed vowels their highest point falls *within* the triangle. There is another classification based on the height to which the tongue is raised. When the *mouth-cavity* shows the widest opening, the vowel is called *open* (विवृत) ; when it shows a narrow opening, it is called *close* (संवृत). Between these extremes there are two well-marked intermediate stages (indicated in the Vowel-Triangle, Fig. 11) named *half-open* and *half-close.*

### § *106. The Front-vowels.*

The position of the four successive front vowels starting from the fundamental *a* are seen the Fig. 13.

The four grades of the openness or otherwise of the mouth cavity is clearly reflected in the shape of the lips [1] as seen below in Fig. 14 :

[1] It must be remarked that unless the vowels are clearly pronounced, and with a little " exaggeration " of the main characteristics these shapes might be missed. In fact in ordinary conversation these are hardly to be noticed.

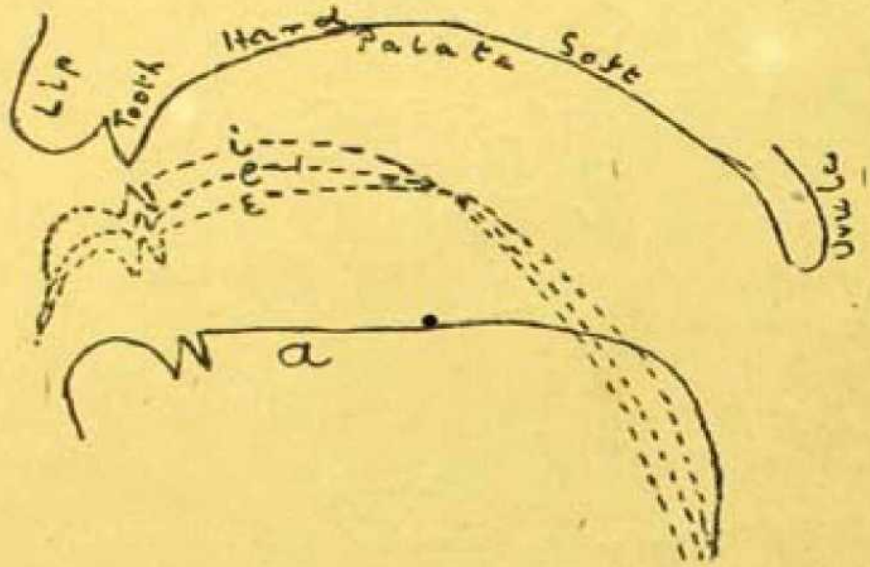



Fig. 13.

The Front-Vowels.

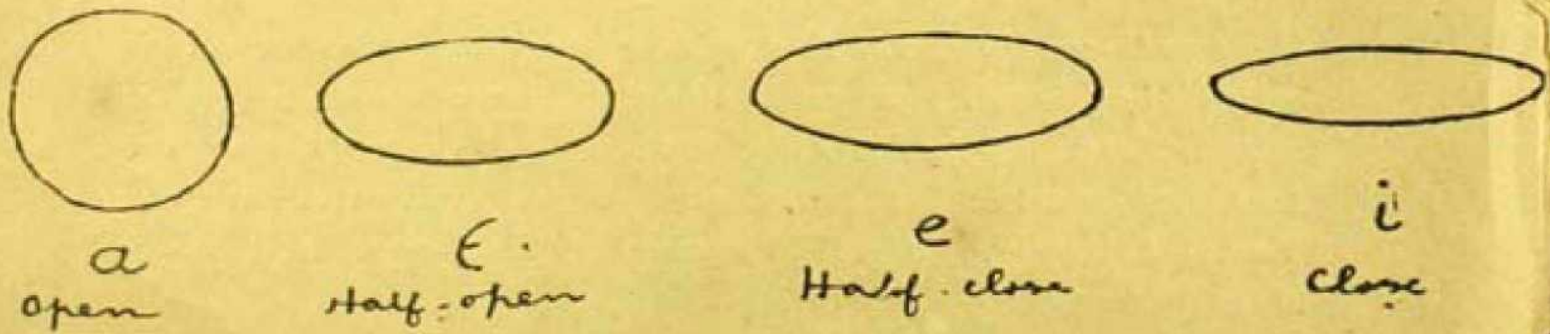



Fig. 14.

Openings for Front-Vowels.

Of these four the *a* (আ), *e* (এ) and *i* (ই) are found in Sanskrit. The *ɛ* is developed in some of the Indian Vernaculars and is clearly heard in the Bengali word এক (*ɛk*). One other point may be here noted. With

[1] The semi-vowel য় (i) is reached through a continuant sound য় (y) which may be called the "fricative *y*." This latter is the sound heard in the English word *yes* and *yard*.

इ (*i*) the tongue approaches very near the hard palate, very close to the contact point of the palatals. A very little raising of the tongue would make a contact and give य् (*y*). Hence the very close connection between the semi-vowel *y* and the vowel इ.[1]

## § 107. *The Back-vowels.*

Again beginning with the fundamental *a* (আ)[2] we get in succession ɔ, *o* (ও) and *u* (উ).[3] These are shown in Fig. 15.

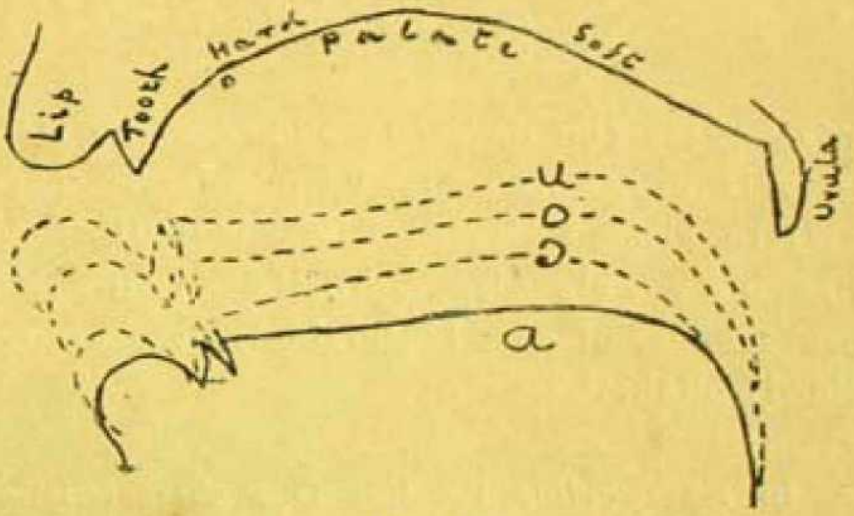



FIG. 15.

The Back-Vowels.

[1] See below, § 111 for "semi-vowels".

[2] Daniel Jones in his *English Phonetics* takes the fundamental vowel to be two-fold (rather three-fold) depending upon slight variations observable in the standard (southern) English pronunciation. I am taking the Sanskrit আ as pronounced by the Marāṭhās as the standard for that language, and hence I start both the series with আ. The Bengali অ (often ɔ) is nearer Jones' open vowel in the back-vowels series. The modern Persian pronunciation of the "long alif" as in *āftāb* (sun) also comes near the fundamental English vowel of the back series.

[3] Jones has the series ɔ, ʌ (অ), *o* and *u* (op. cit., § 98).

The four grades of openness for these are indicated in Fig. 16. It has to be noted that all are *rounded*.[1]

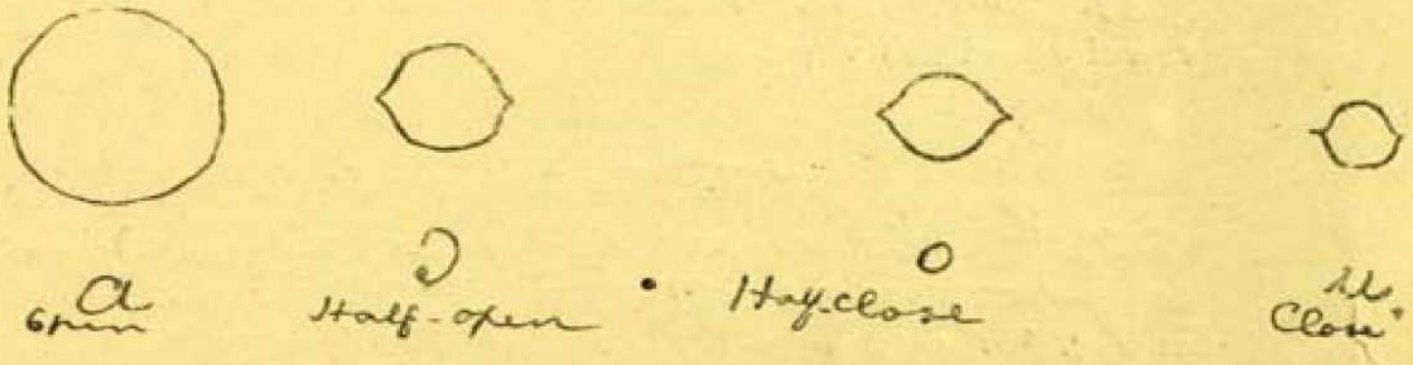



FIG. 16.
Openings for Back-Vowels.

Of these the Sanskrit shows *a* (अ), *o* (ओ) and *u* (उ). The ɔ is heard in some Vernaculars. The sound is very nearly that often given to the Bengali অ. In the back-series of vowels also a further closure of the lips would cause the semi-vowel (bilabial) *u*, through a fricative (voiced) bilabial.[2]

[1] In fact *rounding* the lips is a characteristic of back-vowels. Hence I do not like to follow Jones and include ʌ in this series but rather among the " mixed-vowels".

[2] The Skt. व् has been classified by grammarians as a dento-labial ( वकारस्य दन्तोष्ठम् ). Evidently this is a variant of the older bilabial voiced *u* (also transcribed as *w*). The bilabial spirant (voiced) stage of this is represented by Jones as ʍ or *w̥* (op. cit., § 350 and ftn.). In the I.-E. parent language there were both the types of the semi-vowel, the *u* and *w*. In Skt. though both have become व्, a sharp distinction is made, inasmuch as in the case of the fricative, the व् never undergoes *samprasāraṇa* (change to *u*). Thus, वस् (to dwell) has the perfect उवास, which shows that the व् was I.-E.**u*; but वस् (to dress) has the perfect ववसे which points to an original I.-E. * *w̥*.

### § 108. *The long* ई (*ī*) *and the long* ऊ (*ū*).

Daniel Jones and others have with some reason put down the sounds of these two "long" vowels as the highest grades in the front and the back-series respectively.[1] In both of these the position of the tongue is perceptibly higher than the corresponding "short" vowels, and the vowels are "closer" as well. It is very likely that in ancient Sanskrit there was that distinction between these "long" and "short" vowels.[2] But Sanskrit grammarians have definitely laid down that the difference between इ and ई, and उ and ऊ is merely that of *quantity* and so we must leave it at that, at least as far as Classical Sanskrit is concerned.

### § 109. *The mixed vowels.*

In the triangle of vowels (Fig. 11) the mixed vowels are put in the middle but this does not imply that the middle of the tongue has to be raised. "There is no rising of the tongue in the centre, but a slight *depression*."[3] The figure below tries to give an idea of the position of the mixed-vowel ʌ (ऋ) of Sanskrit. The tip of the tongue and the back are both slightly raised with a slight depression in the blade.

From the figure it is evident why the Skt. ऋ and ॠ are so close that they got confused together and why the Sanskrit Grammarians regarded ऋ as the "short" and

[1] These are transcribed by Jones as *i*: and *u*:.

[2] This idea seems to be supported by the "vowel-gradation" system in Sanskrit. For the difference between *i* and *i*:, *u* and *u*: see Jones, op. cit., §§ 90-92.

[3] Dumville, *Science of Speech*, p. 53.

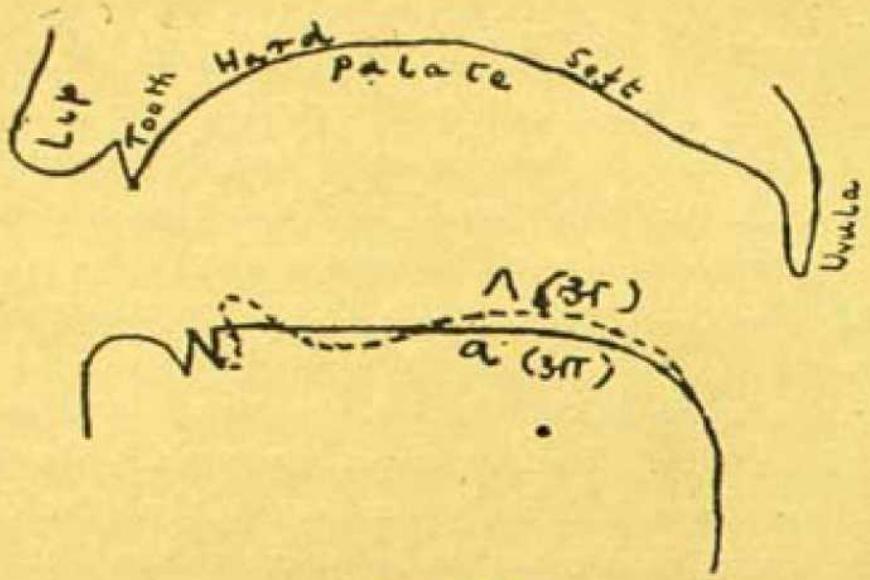



FIG. 17.

The Mixed-Vowel (ऋ) in Sanskrit.

ऋा as the corresponding "long" vowel.[1] Still the essential fact remains that the ऋ and ऋा as pronounced to-day (even by the Marāṭhās) are different in *quality*.

## § *110. Diphthongs.*

The sounds we have considered so far among vowels are all simple sounds. They are each of them capable of a variation of quantity, i.e., of length. But in all

[1] There is reason, however, to suppose that the original pronunciation of ऋ was *a* (short) and *not* *Λ*. The *Λ* sound seems to have been a later development. This is clearly indicated by the *sūtra* ऋ ऋ इति (Pān. viii, 468) which says that "the ऋ which was *open* is now considered (i.e., usually pronounced) close". In view of the fact that in Skt. the I.-E. sounds **a*, **e* and **o* have fallen together it is not at all surprising to find the *Λ* and *a* also confused. Modern Philology has established that Skt. has confused the original I.-E. vowels and Greek has confused the consonants.

languages we get combinations of two or more of these simple vowels, where each is pronounced separately and the combination is felt to be a combination. Hence diphthongs are "long" in quantity. Sometimes, as has happened in modern English, an originally simple vowel is drawn out as it were and is heard as a diphthong. The reverse process is also found, when an original diphthongal pronunciation is reduced to a simple vowel. Thus in Sanskrit the grammarians tell us that ए, ऐ, ओ and औ are diphthongs, and that their length is always two moræ. But as pronounced to-day they may be transcribed respectively *e*, *ʌi*, *o*, *ʌu*. Thus we see the diphthongal value of only two of these is clearly perceptible, whereas the other two have been reduced to simple half-close vowels. But the *sandhi* rules,[1] as well as comparisons with other languages, particularly with the Avesta, very clearly establishes the original pronunciation of these four. These were *ai*, *āi*, *au* and *āu* respectively. So we see that all four have suffered from reduction. The simple sounds **a*, **e* and **o* of the I.-E. parent language have fallen together in Sanskrit as *a*, so that these four diphthongs of Sanskrit stand for no less than twelve original vowel-combinations. What should particularly be noticed is that the sounds *e* and *o* are *later* developments in Sanskrit and do not by any means represent the original I.-E. sounds. But though these new values have developed, they are all four treated as if they had their original values both in *sandhi* as also in metrical composition.

[1] Particularly एचोऽयवायावः (Pān. vi. 1. 78) which could be explained as a special case of इको यणचि (Pān. vi. 1. 77) if we restore the original forms of these diphthongs. In view of this, special value attaches to the order of these two *sūtras* in Pāṇini.

## § 111. *Continuants.*

We saw above[1] that the name *continuant* is given to consonantal sounds where the emission of breath is continuous. These are of four kinds: (*i*) *nasals* where the contact is full and the breath passes through the nose, (*ii*) *spirants* where the contact is partial in the mouth through which the breath passes, (*iii*) *semi-vowels* and (*iv*) *liquids*. The first two have been already considered; the next two we will consider now as they are pretty-close to vowels in their nature.

[1] § 99, fin.

### § 112. *Semi-vowels and Liquids.*

In ordinary speech[1] there are certain sounds which have no obstruction when passing through the mouth. These we call vowels and they are all voiced.[2] The rest are called consonants. This distinction is a real acoustic distinction and it depends on the relative sonority[3] of the sounds we have called vowels. They do, indeed, carry farther than the consonant sounds of ordinary speech.[4] But in certain cases certain vowels—the close vowels of the front and the back series—may often be sounded in such a way as to sound as consonants. These are called *semi-vowels*. We have seen above how the front vowels pass into the semi-vowel i̯ and the back-vowels into u̯. And we also saw that there is an intermediate (spirant) stage of j and w̥ respectively. The spirant character of the semi-vowel is often hidden by the "voice" which they possess. There are special conditions under which a vowel could pass into a semi-vowel.[5] (*i*) They must be close vowels which are vowels of lesser sonority and (*ii*) they must be followed by vowels of greater sonority (i.e. dissimilar vowels).[6]

Then there are the two sounds ऋ (*r*) and ऌ (*l*).[7] They are called *liquids* because they often assume the value of

[1] I.e., not considering whisper.

[2] See above, § 103.

[3] Hence the Sanskrit name स्वरः.

[4] Hence some languages avoid all consonant sounds at the end of words and all languages allow only a few consonant sounds to be finals in words. But no vowel is debarred.

[5] Jones, loc. cit., § 344.

[6] Hence इको यणचि (Pāṇ., VI.i.77).

[7] Dumville, loc. cit., p. 85. Some writers include the semi-vowels

vowels. These two sounds have been classified by Sanskrit grammarians with the semi-vowels but these two are essentially *consonants*, which become vowels sometimes. They are both voiced in Sanskrit.[1] They are both continuants for with them there is a continuous issue of breath along the sides of the mouth even though the tongue maintains full cacuminal contact for the र्, and the dental contact for the ल्. There are several varieties of these two. The र् as usually pronounced in Sanskrit to-day is more the trilled variety, where the tongue touches the teeth-ridge and delivers a rapid series of taps thereon. The cacuminal (मूर्धन्य) *r* of Sanskrit Grammar[2] is made by making the cacuminal contact (by rolling the tongue back) and allowing the voiced breath to pass out on both sides of the tongue. The sound is very like the growl of a dog and hence the Latin grammarians called the *r* the *littera canina*.[3] Here too a "trill" may be added by the regular flapping of the uvula by the passing current of the breath. The *l* also has many varieties, but in Skt. it is a clear dental *l*. There is a tendency in Indo-Aryan languages all through their history to confuse these two sounds.[4]

## § 113. *Sonants* : (*i*) *Liquids.*

Closely connected with the liquids are two sounds classified as vowels in Sanskrit. These are the ṛ (ऋ)

and even the nasals among these. This is not quite unreasonable for they all have one common quality that they can be changed to vowels.

[1] Unvoiced varieties are also possible.

[2] ऋटुरषाणां मूर्धा.

[3] Noel-Armfield, *General Phonetics*, p. 70. He mentions that the uttering of this sound "accompanied by rattle of a chain" is often sufficient to frighten away beggars and undesirable people!

[4] रलयोरभेदः. This confusion was started because at a very early period the Indo-Iranian branch completely lost the *l* from their speech. Neither the Avesta nor the earlier Vedic show the *l*.

and *ḷ* ( ऌ ) sounds.[1] There are occasions when the vowel connected with the liquids ( *r*, *l* ) drops out and then there is left a group of consonants which could not be pronounced unless one of these consonants acquires a vowel-value (i.e., it is used in building up a full syllable). In other words in such circumstances the liquids have to be "sonantised", thus the I.-E. root **kar-* (to do) makes the past participle by adding the suffix *-tás*. The accent on the suffix causes the *a* in the root syllable to drop out and therefore we get **krtás* which cannot be pronounced until the *r* becomes *ṛ*. So we get **kṛtás* ( = Skt. कृतः). In the vernaculars these Skt. sonants have become quite changed. The *ḷ* is a rare sound even in Skt.[2] The *ṛ* loses its sonant character and becomes once again a liquid with a vowel attached. Thus ऋषि (*ṛṣi*) of Sanskrit is pronounced variously as रिषि (*raṣi*), रिषि (*riṣi*) or रुषि (*ruṣi*).

## § 114. *Sonants : (ii) Nasals.*

Besides the liquids, nasals too (especially *m* and *n*) can be sonants, i.e., can make full syllables. They are usually denoted as *m̥* and *n̥*.[3] In Sanskrit these sonant nasals have become merely अ (*a*) and the nasal seems entirely lost. Thus I.-E. ** man + tás = *mn̥tas* (Skt. मतः). The Latin *mentus* preserves the nasal and gives the clue to the original sonant nasal. So also the negative prefix अ used before consonants was I.-E. **n̥*.

[1] If the syllables are voiced, the *r̥* and *ḷ* would be heard as the finals in French *marbre* and English *marble* respectively.

[2] It occurs only in one root, क्लृप्.

[3] The sounds are heard in *prism* and *open* if the finals are voiced. It is rather unfortunate that Jones uses the symbols *r̥*, *ḷ*, *m̥*, and *n̥* to mean the breathed (i.e. voiceless) varieties of these sounds (loc. cit., see under these symbols).

### § 115. *The "pure" Aspirates.*

Besides the aspirated contact sounds we have considered above[1] there are two further aspirate sounds to consider, as far as Sanskrit is concerned. They may be called the "pure" aspirates. These are really breathings either voiceless or voiced. The voiceless breathing is the Sanskrit *visarga*.[2] It is used as a voiceless breathing after vowels and is represented by the symbol *ḥ*. The "general aspirate" is the ह (*h*). This is the *voiced breathing* by itself, and because it is essentially in the glottis Sanskrit grammarians have enumerated it amongst the कण्ठ-sounds.[3]

### § 116. *Table of Sanskrit vowels, semi-vowels and sonants.*

The following table shows the Sanskrit vowels in their mutual relations together with the connected consonants and sonants:

[1] See table at end of § 102, 231.

[2] The spirants in Sanskrit (all voiceless) are represented often by the *visarga*. The word means literally "emission" (of breath).

[3] अकुहविसर्जनीयानां कण्ठः.

| Class. | Simple. | | Diphthongs. | | Semi-vowels. |
|---|---|---|---|---|---|
| | Short. | Long. | Guṇa.[a] | Vṛddhi.[a] | |
| Fundamental | ... | आ | ... | [ आ ][b] | ... |
| Mixed ... ... | अ | ... | [अ][b] | ... | ... |
| Front ... ... | इ | ई | ए | ऐ | य् |
| Back ... ... | उ | ऊ | ओ | औ | व् |
| Sonant ṛ ... | ऋ | [ॠ][c] | [अर्][b] | [आर्][b] | र् Liquids. |
| Sonant ḷ ... | ऌ | [—][c] | [अल्][b] | [आल्][b] | ल् Liquids. |
| Sonant ṇ ... | [अ][d] | — | [अन्][b] | [आन्][b] | न् Nasals. |
| Sonant ṃ ... | [अ][d] | — | [अम्][b] | [आम्][b] | म् Nasals. |

For notes *a*, *b*, *c*, *d* see next page.

## § 117. *The full classification of sounds considered in this chapter.*

We may now give the full classification of the sounds considered so far with special reference to Sanskrit. These are shown in the table annexed.

The one striking point about this table, based on purely phonetic considerations, is the very close agreement it shows with the *Śiva-Sūtras* of Pāṇini which I have quoted. There will be noticed only two discrepencies, viz., in the position of the spirants, which Pāṇini has enumerated at the end of voiceless sounds and of the aspiration which comes at the very end. Pāṇini's order of the explosives of various kinds is somewhat different to that given here.[1]

(*a*) The two types of diphthongs in Sanskrit are clearly connected, With reference to the accent there is what is called *vowel-gradation*. The simple-vowels are called vowels of the *weak-grade*, the *guṇa* diphthongs are those of the *strong-grade* and the *vṛddhi* ones are said to belong to the *lengthened-grade*. See below § 141.

(*b*) The Sanskrit Grammarians give these as the *guṇa* and *vṛddhi* forms but they are not real diphthongs, hence they are put here in brackets.

(*c*) The existence of "long sonants" is a matter of dispute. I personally (in spite of the weight of Brugmann's authority) do not think long sonants are possible. My reasons, based on Sanskrit grammar, may be summarised as follows :

(*i*) The very nature of the sonant must necessarily make it *short* and in the very closely connected Avesta, the *r̥* is represented by *ərə* which is never long.

(*ii*) In Sanskrit there is no long *l̥* admitted even by the Indian grammarians? Cf. *Siddhānta-Kaumudī* on the *sūtra* ऋक: सवर्णे दीर्घ: (Pāṇ., VI.1.101).

(*iii*) Even those cases where the long *r̥* does occur in Sanskrit it can be explained either (*i*) as a grammatical convention, e.g., in roots of the 9th class, such as जॄ, पॄ, etc. or (*ii*) as analogical formations, e.g., in the accusative and genitive plurals of nouns ending in *r̥*; where the influence of देवान्, देवानाम् ; कवीन्, कवीनाम् ; गुरून्, गुरूणाम् ; has led to forms like पितॄन्, पितॄणाम्.

(*d*) The **n̥* and **m̥* are represented in Sanskrit by अ only but the *guṇa* and *vṛddhi* grades are well known.

[1] The reason is to be sought in the exigencies of Sanskrit *sandhi*.

# CHAPTER VIII

## Phonetic Tendencies in Language and Phonetic Change.

### § 118. *"Average" pronunciation.*

It is a well-recognised fact that like all things in nature language is not stationary. It is always changing. But the change, at any rate in languages possessing a literary and standard dialect, is so very slow that for all intents and purposes the language may be said to have remained stationary during a short period, say during a generation or so. If this were not so grandparents would not be able to understand their grandchildren.[1] Even at one period and in one language there are differences of "dialect" depending upon social status, environment, education and a hundred other factors. In fact no two families have the same language entirely, nay, we may go further and say that each individual speaks a language which is his own. His mannerisms, his words, his phrases, his intonation, his pronunciation could not *all* be found in any other person. But still we find that a very large number of individuals speaking one language understand each other and even foreigners who learn the language manage to make themselves understood. So there must be an "average" standard of intonation and pronunciation

[1] Among savages who have no "standard dialect" the language changes so rapidly that a body of hunters going out on a long expedition find themselves not understood on their return home after four or five years.

and the variations would be in the individuals. As long as a person keeps near enough to the average he is understood and his little idiosyncracies pass unnoticed. In fact the anxiety to be understood operates constantly and keeps the person well near the average.

### § 119. *How the "average" pronunciation is acquired.*

In acquiring the average there are several clearly marked stages. Whether acquired by a native child or a grown-up foreigner the process is the same, only in the latter case it is more or less conscious and hence not "natural" (or intuitive) but laborious.[1] The essence of this process of acquiring the language is imitation. Imitation is a deep-rooted faculty in human beings and Aristotle has said that man is the most imitative of creatures.[2] The child learns everything (especially speech) through imitation. The following principal stages may be noted in this process of acquiring speech :

(*i*) The utterance of the sound in the hearing of the child ;

(*ii*) The sound-picture produced in the mind of the child ;

(*iii*) The imitation of the sound by the child ;

(*iv*) The sound-memory thus produced in the child's mind ; and

(*v*) The motor-memory produced in the child's mind.

[1] Here it may be mentioned quite clearly that no individual child is born with an inherent ability to speak any one language better than any one. The acquiring of speech is purely imitative and a child can acquire any language it hears spoken around it entirely irrespective of its parentage. With grown-ups it is a question of getting out of acquired habits of many years hence the laboriousness of the process. Hence, obviously, languages are best acquired in childhood.

[2] μιμητικώτατον τῶν ζώων.

If all these steps were perfect and merely mechanical we would get imitations absolutely identical with the original and the language would never change phonetically. But none of these steps could be perfect. The speech of the utterer may be defective and the child may imitate the defects of the speaker.[1] The hearing of the child may be defective and hence the sound-picture may not be exact. The imitation by the child may be defective owing to defective vocal organs, or want of proper control over them or failure of the elders to correct the defects.[2] The child does not hear only one speaker but many, and while imitating it strikes the average. Naturally its imitation would come nearest to the speaker it hears oftenest. Hence foreign languages are best acquired from native speakers.[3] The third step is the most important and it must be very carefully watched by teachers and parents. By continuous repetitions and practice the "sound-memory" of the particular word or phrase is established and with it (in fact as almost a part of it) there is the "motor-memory", the memory of the movements of the vocal organs needed to produce it. These last two stages are best exemplified when acquiring at a later age some new language, especially a language whose script is very different. At first the printed or written

[1] The "nasal-twang" of America may be traced back to the nasal psalm-singing of the Puritan "Pilgrim Fathers".

[2] Many fond parents like the "lisping" of children and instead of correcting them actually encourage this habit. A great many people have bad speech because their parents never corrected them. I know of a gentleman who pronounces all velars as dentals.

[3] In my own case I learnt English in India from Indian teachers and I found when I went to England that I could not make myself understood until I *consciously* tried to imitate the sounds I heard around me. An English acquaintance of mine, who at first laughed at my pronunciation, afterwards helped me to acquire it correctly.

sign has to be consciously connected with the "sound-memory" and the "motor-memory" and each word has to be painfully "spelt" out [1] and then after the memory is established the language comes quite rapidly. In fact the finest and quickest way to acquire a language is to be surrounded with speakers of it, so that the last two stages may be firmly established. And soon there comes the time when a mistake made in speaking a language is immediately detected by the *ear* [2] of the speaker himself.

### § 120. *Individual deviations from the average are important factors in language.*

Though the individual speaker strikes an average and even though he be very carefully trained still he would betray small differences from the standard type. These differences may be very little intrinsically, but in the course of years these mount up and thus we find that language changes definitely in course of time. The individual seems all the time to be subject to his environment, but he also reacts upon it. The phonetic deviations of an individual are very varied and due to many causes. Very often it is the desire to imitate some well-known public character—some great statesman, or religious preacher. It may even be the desire to imitate some snob of

[1] I have had similar experience in learning Persian and Bengali. I have also known a child so badly taught that he could only *spell* out his English reader.

[2] So also for those who do a lot of reading and writing a word wrongly spelt is shown up glaringly to the *eye*. I know people who when in doubt about the spelling of a word write it out in various ways and accept that which *looks* correct.

the smart set. The pronunciation "fellah" (for *fellow*) heard so often to-day is due to a desire to be smart. A few decades ago the smart set in England used to have a queer drawling speech.[1] In Persian it is now fashionable to say *Īrūn* and *īshūn* for *Īrān* and *īshān*. In Bengali the word ছিলাম (*chilām*) is often pronounced by good speakers as either *chilum* or *chilem* and such good speakers would always find imitators.[2] In Gujarati too there is Narasingrao Divatia who being a great writer and a fine speaker and conversationist and an authority on the language is moulding Gujarati pronunciation very markedly.[3] There are purists in every language who try to set the standard. But the point to be remembered is that it is *an individual* (who may be utterly unknown) who sets the ball rolling. And the deviation may be due to a desire of a scholar or a purist to be absolutely correct, or it may be due to a slackness of pronunciation due to carelessness or ignorance. In fact most of the sound changes are not produced through the influence of scholars or purists but through the carelessness of the mass of speakers.[4]

[1] I believe it was the influence of Lord Dundreary (of the whiskers). A good deal of information about the smart set of those days and their ways of speech could be gathered from the *Punch* of those days.

[2] There is a distinct class of Bengali speakers to-day who deliberately imitate Rabindranath Tagore in all his mannerisms. It is but a form of homage paid to a great man.

[3] He is specially insistent on correct pronunciation and he deliberately spells phonetically in all his writings. A controversy is going on at present about correct Gujarati spelling.

[4] Is this why many writers speak of phonetic *decay*?

## § 121. *Sound changes proceed in one direction and are uniform.*

When a phonetic change has started at any particular period it does not go back. In other words there is no compensating change on the other side to restore the "average". If that were so language would hardly change at all. The essential fact is that *the "average" itself is slowly but surely changing*. Once a change has begun in one direction in one group of sounds a similar change *in the same direction* would begin in an allied group. The reason for this latter may not be the same as that which began the first change. In fact it seems more than possible that a subtle form of analogy is at work here. Thus we see in Germanic languages there occurred twice a sound-shifting,[1] which embraced all the original explosives and moved exactly in the same direction.[2] It must not be imagined that these changes occur in one group *after* another. They occur more or less simultaneously once a tendency, which might be called a "linguistic drift", is set up. Hence *all phonetic changes in language tend to be regular*. The establishing of this truth was a matter of prime importance in the history of modern linguistic science because it raised the subject to the dignity of a science. It is on account of this regularity of phonetic change that we get phonetic "laws" which have *nearly* all the force of a law of science. They are almost unalterable and because they are unalterable they

[1] Sometimes the German word *Lautverschiebung* is used for "sound-shifting".

[2] These are known as the first and second sound-shiftings. They were first formulated by Rask and later by Grimm. Popularly we know them under the term *Grimm's Law*.

enable us to predict. Words which had been postulated for different languages but not known from the records at that time have been subsequently discovered when fresh inscriptions and records have come to light. The power of prediction is a characteristic of all laws of science and this phonetic "laws" do possess.

## § 122. *Phonetic "Laws".*

What has been stated above is not quite in accord with the notions an average person has of philology. The ancient notion still persists that in philology "consonants have little value and vowels no value at all".[1] So it would be well to define exactly what we mean by Phonetic "Laws". As Tucker says very rightly this is a "much abused expression".[2] We hear this expression in connection with every language we may happen to investigate. One important fact has to be borne in mind. If we are investigating a particular sound in any language at *the present time* we cannot lay down any phonetic "law" but we speak of a phonetic *tendency* in a particular direction. Thus we may say that there is a tendency in English to-day to aspirate the initial *h* in certain words where it was mute. So also in Bengali we may speak of a tendency towards a strong stress accent or in Gujarati of a mixing up of the palatal and the cacuminal sibilants or in Persian of having the front and back vowels more close and of the explosives being aspirated. In none of these cases could we speak of a phonetic "law". All our phonetic laws have been tendencies at one period and only when their

[1] And hence queer derivations, like the one noted on p. 36, ftn. 1, still persist.

[2] *Introduction to the Natural History of Language*, p. 304.

work has been completed, they have become laws. Many of these tendencies may be changed or may cease operating and there may be a few that successfully complete their work. Some may complete the work in certain localities only. Thus the change of Aryan *s to Iranian *h* under certain circumstances [1] was a tendency which affected the whole of the Iranian branch, whereas exactly the same tendency in Gujarati (change of an original *s* to *h*) is strictly localised to a few districts, and to a particular social stratum.[2] Hence as a definition of phonetic law the following given by Tucker seems about the most accurate :[3]

*A phonetic law of a language is a statement of the regular practice of that language at a particular time in regard to the treatment of a particular sound or group of sounds in a particular setting.*[4]

## § 123. *"Exceptions" to phonetic laws.*

If all the phonetic tendencies in language depended solely upon the working of the vocal organs,[5] phonetic laws would be quite mathematical in their precision. But we have seen already that the speaker or rather the

[1] Mostly when initial.

[2] This is a special peculiarity of the dialect of my own village, and even though many of us have lived all our lives outside it and have been "well-educated", still the village words and pronunciations persist at home and are especially to be marked when several of us foregather. This is specially to be noted for Scotchmen among the English-speaking peoples.

[3] Op. cit., p. 306.

[4] See further below.

[5] Precisely for this reason Tucker (op. cit., p. 307) pleads for the word "rule" instead of the word "law". He maintains that the word "law" implies "stringency of application". I personally

human mind is the most important factor in speech. And this would at any time run counter to these phonetic "laws". In short, the human mind is absolutely supreme in language and quite autocratic and so beyond any laws. Besides this main source of "exceptions" there are several others which may be considered. In the first place a borrowed word would obviously not come under the influence of a phonetic law unless it was borrowed at a period anterior to the law itself. Thus the Sanskrit word *karma* borrowed in English quite recently does not obey Grimm's Law. This is very well illustrated in the case of Latin words borrowed into Germanic *after* the first, but *before* the second sound-shifting. Being borrowed words they do not show the first shifting but they do show the second. Thus Lat. *pondus* was borrowed fairly early in Germanic (Gothic) as *pund*,[1] but in Old High German it has become *phunt* owing to the second sound-shift. Dialect words, too, are often exceptions, for often the phonetic law refers to a particular dialect, usually the "standard" dialect of literature. Then again many writers deliberately use archaic words and indeed they may succeed in reviving obsolete words and forms. Thus in Gujarati many older forms and endings have been revived by Narsingrao Divatia and Nanalal and Khabardar till they have become re-accepted in current Gujarati.

would prefer (with the Junggammatiker) the word "law". I would maintain that the word "exception" should mean a case which goes counter to a law and could not be explained by any other known law. If it can be explained it ceases to be an "exception". Hence because the "exceptions" to phonetic laws are only apparent, the word "law" in this connection cannot be said to lack in "stringency of application".

[1] Eng. *pound* (weight). For further examples see Max Müller's *Science of Language* (1899 ed.), II, pp. 255 f.

singrao especially is particularly fond of these revivals of fine old Gujarati words and phrases. So also we find in English Chatterton deliberately using obsolete words [1] and many modern poets going back to old English words instead of the usual ones derived from Latin.[2] This deliberate "revival" of ancient words is seen in the history of every language. There are periods in every literature when the language becomes "learned" and shows the influence of classical languages. Then there is a reaction when the indigenous or "native" word is used in preference to the "classical" word, which is felt to be pedantic. In English there is a clear tendency to use good old English words to-day in place of Latin words.[3] In Bengali Rabindranath Tagore has set the style for reviving old genuine Bengali words in place of Sanskrit words and a reaction is plainly visible against the too

[1] Chatterton made many serious mistakes owing to his ignorance. A very strange case of similar deliberate attempt to write an old and nearly forgotten language is the *Yasna Haptanghāiti* (Yas. xxxv-xlii) which tries to reproduce the older Gāthic dialect of the Avesta.

[2] This partly explains the alternating phases of classicism and romanticism observed in most literary languages.

[3] In India the first teachers of English in the closing years of the 18th and the beginning of the 19th century were imbued with a spirit of classicism. The influence of Macaulay and his style is very clearly seen in the English taught to the older generation of Indians, about seventy-five years or more ago. And this classical style continues (though modified a great deal) in our schools even to-day. I remember an instance of this style which happened in a school in Bombay in my boyhood. The clerk of a school was asked by the Headmaster to send a notice round that teachers should see that the boys did not make too much noise during school hours. The clerk, who had been trained completely in the ancient manner, sent round the following wonderful composition: "There has emanated a peremptory mandate from the higher tribunal that every pedagogue should exercise circumspect vigilance over every stripling that is under his charge"!

classical style represented in the previous generation by Iśvarachandra Vidyāsāgara and others. In Gujarati Govardhanram Tripathi and his school has been too recent, but still signs are clearly seen of the coming reaction against Sanskritising.[1] The dominance of the vernacular after a time degenerates into vulgarity and this gives a chance again for the revival of "classicism". In all these cases discussed above we often get an ancient word used practically as a borrowed word and hence probably running counter to the phonetic tendencies of the language to-day. We may not quite see this point, but these would provide future investigators with phonetic puzzles, because to them these words would be "exceptions" to the phonetic laws prevailing in the 20th century.

### § 124. *Analogy is the most fertile source of these "exceptions".*

But all said and done such borrowings from another language, or from earlier stages of the same language, explain but a small percentage of exceptions to phonetic laws. The most disturbing factor is analogy. A very good example we saw above (orthographic chiefly) in the three words *should*, *would* and *could*. Another fine

[1] I think that as national feeling grows and as the realisation (though slow) comes that one is an Indian first, and then only Hindu or Moslem or Parsi, this unreasoning dominance of Sanskrit in our Vernaculars would assume correct proportion in our languages. I have read some Gujarati "translations" from Sanskrit—they are merely the Sanskrit with Gujarati pronouns, auxiliary verbs and particles put in. I would much rather read the original! As regards Gujarati I have discussed the question in detail in my "Main Currents of Gujarati Literature", which forms the introductory essay to the Vol. I of my *Selections from Classical Gujarati Literature* (Calcutta University).

instance is of the three words forming a "natural group"—*father*, *mother* and *brother*. The *th* in all three now sounds alike, but in the original Germanic they were not the same. In Old English they were *fader*, *moder* and *broðer* [1] and in German *Vater*, *Mutter* and *Bruder*. In modern English analogy has levelled away the differences. Another type of "exceptions" to regular phonetic rules are to be found in borrowed words which are made to sound more or less like the native words. Here too "analogy" works through an associated group of sounds. A good example is the Sanskrit word क्रमेलक (camel) which is borrowed from the Semitic. The insertion of *r* and the suffix *-ka* seems to make it sound like Sanskrit.[2]

## § 125. *Grimm's Law.*

Grimm's Law furnishes a good example of a "phonetic law", and its history shows also very clearly how the modern standpoint was reached, viz., that "phonetic laws have no exceptions which could not be explained as due to the working of the human mind". This famous law was first formulated by Rask and by Ihre. But it was Grimm who gave it its elaborate form and gave numerous instances of it, and hence his name has been always associated with it. It refers to the sound changes in Germanic languages [3] and to two distinct periods. The first occurred in prehistoric ages and differentiated

[1] The difference is due to the original accent in the I.-E. as explained by Verner's Law.

[2] Very possibly there is "popular etymology" also working connecting it with the word *krama* and referring to the usual leisurely gait of the animal.

[3] Closely similar deviations of sound occur in other families of languages as well as among dialects of various languages.

the Germanic consonant-system from that of the other branches of the Indo-European. This is called the " first sound-shifting ".[1] The " second sound-shifting " occurred about the 7th century A.D., or a little earlier, and differentiated the High German from the Low German dialects. The law of Grimm can be clearly understood from the accompanying diagram. If we take the sounds marked at any of the three points of the triangle to represent the parent I.-E. sound, (best preserved in Sanskrit, Greek and Latin,[2]) then the Germanic (i.e., Gothic and Low German) sound corresponding would be got by taking *one* step in the direction indicated by the arrow. This is the first shifting. For High German (Modern German) we take one further step] (the second shifting) in the same direction.

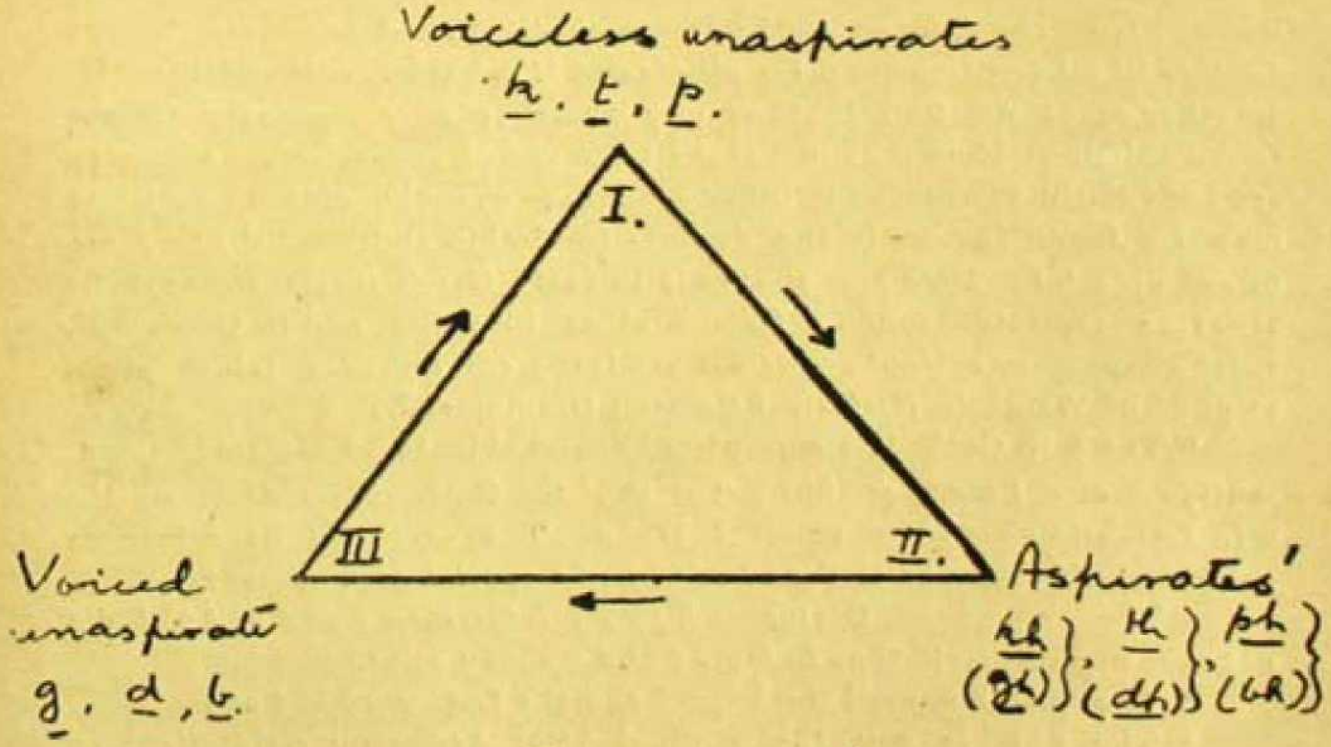



Fig. 18. Grimm's Law.

[1] Or *Lautverschiebung*.

[2] These are to be taken in the order mentioned, Sanskrit re-

A few examples would make this clear: [1]

| I.-E. (Skt., Greek., Lat.) | Germanic. (Goth., Eng.) | High German. (German.) |
|---|---|---|
| क ; *quo* | *hwô* [2] ; *who* | *hwër* [3] |
| त्वम् ; *tu* | *thou* | *du* |
| पिता ; *pater* ; *Papa* | *father* ... | *Vater* [3] *bâbest* [4] (O. H. G.) |
| ह्यस् (*घ्यस्) ; *hes-* | *gis(tra)* ; *yes(ter)-* | *këstre* (O. H. G.) |
| धृष् ; *θρασυ's* (bold) | *(ga)-daursan* | *turren* (M. H. G.) |
| भवामि ; *φυ'ω* | *bêom* ; *be* | *pim* (O. H. G.) |
| γενο'ς, *genus* [5] | *kuni* ; *kin* | *chunni* |
| दश ; [6] δε'κα ; *decem* | *taihun; ten* | *zehn* |
| τυ'ρβη ; *turba* | *þorp* ; *thorp* | *dorf* |

presenting the parent language most closely. Note that the law refers to *consonants* only.

[1] The statement of the law is not quite so simple as might be thought from the diagram. The law is exactly as stated here for the dentals in all positions and for all classes if we start with position II. In other cases we find that *usually* there is only one step in the sound-shifting. Note that in Sanskrit the voiced and voiceless aspirates are kept distinct, whereas in other languages even though both varieties may be found (as with the dentals in Gothic and English) they are mixed up a lot. Note also that only in early Greek (besides Sanskrit) are true aspirates found. In the other branches, and in Greek too, these changed to spirants or fricatives fairly early. (See tables given at p. 95 of Wright's *Historical German Grammar*, I.)

[2] The *h* in Goth. is a spirantised sound akin to an aspirated *jihvâmûlîya*, or Pers. چ (*kh*). The *w* of the Goth. corresponds to the *u* in Lat. and goes back to an I.-E. **u*. The aspirates have become spirants in German as well and have had a special development.

[3] The change of Germanic *h* to High German *g* and of *f* to *b* did *not* take place. Note that in Ger. *f* and *v* sound alike.

[4] The word means "the Pope" and the Lat. word is *Papa*.

[5] The Skt. is जन:, the original velar becoming palatalised on account of the front vowel *e*.

[6] Here the Skt. *ś* goes back to an original I.-E. palatalised velar. The treatment of this sound has given rise to the distinction between the *centum*- and *satam*-languages. See above Appendix B, §3, pp. 127f.

The above is a fairly simplified manner of enunciating Grimm's Law. But Grimm himself had remarked that there were a large number of "exceptions" to this statement of his. He himself saw that certain of these exceptions were quite regular. Thus in the combinations **sk*, **st* and **sp*, the *s* prevented the sound-shifting from taking place. So also in the combinations **kt* and **pt* the *t* is unchanged; while **tt* became in Gothic ⊁ *t* and later *ss*. Examples :

| I.-E. (Skt., Greek, Lat.) | Germanic. (Goth., Eng.) | High German. (German.) |
|---|---|---|
| *pisces* | *fisks* | *fisch* |
| अस्ति ; ἐστι ; *est* | *ist* | *ist* |
| स्पश् ;[1] *-spicio* | ... | *spëhōn* |
| अष्टा ;[1] οκτω' ; *octō* | *ahta'u* | *acht* |
| नप्त ; *neptis* | | *nift* (O.H.G.) |
| विद्ध [2] | *wissa* ; *y-wis* | *wissa* (O.H.G.); *gewiss*[3] |

## § 126. *Grassmann's Law.*

This accounted for many so-called exceptions but still there were a lot more left. There were some particularly trying equations, which seemed to break this law completely. Thus बोधति and Gothic *biudan* and O. H. G. *bëotan* (to bid) are clearly connected but the initial *b* sound *both* in Skt. and Gothic is very puzzling. Similarly Skt. दभ् and Gothic *daubs*[4] show in *both* cases an initial *d*. It was Grassmann who solved this difficulty. He

[1] See footnote 3, p. 264.

[2] Past participle of विद्, to know.

[3] Used adverbially to mean, "surely", "certainly".

[4] Means "obstinacy" or "obduracy". The Ger. *taub* means 'deaf".

being fully conversant with both Sanskrit and Greek knew the ordinary rule which holds good for botl. these languages, namely, that if two consecutive syllables are aspirates the first becomes de-aspirated. We get such examples in Sanskrit as दधामि, बभार, जुहोति etc., and in Greek as τί'θημι, πέ'φυκα, κεχαρό'μην etc. Grassmann compared the Greek and Sanskrit forms together and though the initials differed entirely, this very fact gave the clue. Thus, in the two cases we have taken the words including the Greek would be put thus : बोधति—πεύθεται—*biudan*, and दभ्—τυφλό'ς[1] —*daubs*. Now the only way in which we can reconcile the Sanskrit and Greek initial sounds ( ब्, π and द, τ) is by postulating that *both* go back to the same I.-E. aspirate (**bh* and **dh*). In Greek these voiced aspirates being represented by the voiceless φ and θ would give immediately by Grassmann's Law π and τ and in Sanskrit ब् and द ; and *also* the initial *b* and *d* in Gothic would follow from Grimm's Law.[2] Thus Grassmann's law explained a lot more of the exceptions.[3]

## § *127. Verner's Law.*

The next and the most important supplementing of Grimm's Law was by Karl Verner. He discovered that the operation of the Law of Grimm depended on the position of the accent. He laid down that an original **k*, **t*, **p* changed in Gothic in accordance with Grimm's law if the accent *preceded* ; but if the accent was on the

[1] Means "obscure" or "blind ".

[2] Thus the postulated I.-E. roots would be **bhendh-* and **dhobh-*.

[3] The words in Skt. like छिद् and क्षुद् are also special cases of Grassmann's Law according to Max Müllar, *Science of Language*, II, pp. 271f.

vowel *following* the shift was a *double* one, i. e., to *g*, *d*, *b*. Examples :

| | | | | |
|---|---|---|---|---|
| Skt. *yuvas'ás* | Lat. *juvencus*, | Goth, *juggs*[1] | (not | *jughs*) |
| *s'atám*, | *centum*, | *hund* | ( ,, | *hunt*) |
| *saptán*, | *septem*. | *sibun* | ( ,, | *sifun*) |

The working of Verner's Law can be seen very well in the conjugation of the strong (i.e., irregular) verbs in Germanic languages, e.g., *friosan* (to freeze) and the past participle *gi-froran* ; *kiosan* (to choose), ppt. *gi-koran* ; also in nouns, e.g., *wolf* and *wulpa* (she-wolf) ; *swëhur* (father-in-law) and *swigar* (mother-in-law).[2]

### § 128. *The growth of precision in phonetics.*

The history of the various phonetic laws we have been so far considering shows us quite clearly how the science of Linguistics has gradually grown in precision. When Grimm's Law was first formulated the exceptions were so many that it could hardly have been termed a "law" at that period. But later discoveries and supplementary laws (like those of Grassmann and Verner)[3] tended to reduce the number of exceptions. Even then there are left a fair number of cases where none of these laws are obeyed. And here the explanation is to be found in the psychological laws of language. In fact we are now arrived at a stage when we may assert that there are no exceptions which cannot be explained. Added to this are the growing precision in the methods of phonetic research, the use of the laryngoscope, of the gramophone, of recording apparatus and so forth, as well as of more precise symbols to represent the finer differences in pronunciation

[1] In Goth. *gg* stands for *ng*.

[2] All instances from O.H.G.

[3] There are several other laws supplementing Grimm's Law.

and intonation. Of course, none would assert that we have investigated phonetics to the fullest extent, but we do assert that we have attained a degree of precision unknown in the older days; and instead of being derided, the science of Linguistics is becoming more and more respected to-day and is regarded as a study worthy of great minds.[1]

*§129. Sound etymology is based on precise phonetic laws.*

So far we have been considering phonetic laws in general and as an example we considered Grimm's Law in some detail. We have similar phonetic laws for each language and dialect and a thorough investigation of these is of the utmost importance. Of course the phonetic laws of one language are very different from those of another. Hence it follows that words utterly different from one another in sound are often identical in origin. For instance, Avesta *aŝa* and ऋत, श्रुत and *loud*, श्रवः and *hare*, जोष: and *βι'ος* and *quick* are cognate groups. This led Max Müller to lay down the dictum that "sound etymology has nothing to do with sound".[2] And the modern student of languages always views identity or even resemblance in the sounds of words from two different languages with suspicion. Very often words entirely different in origin come to be pronounced similarly even in the same language; *bear* in English and ऋक्ष ("bear" or "star") in Sanskrit are but two examples out of a very large number. So varied are the workings of the human mind that unless one is absolutely sure of every link in

[1] The bestowal of the Order of Merit on Sir George A. Grierson, the organiser and inspirer of the *Linguistic Survey of India* in June, 1928 is surely a sign that Linguistics has now been recognised as deserving a place among the sciences.

[2] Op. cit., pp. 303 ff.

the chain and has carefully examined each vowel and consonant between two words, one should never venture to give out any etymological equation. Hence one must be quite sure of the phonetic laws of the languages one is comparing. There are now-a-days many accurate "etymological dictionaries" for many languages, so that while working at a new group of languages one can learn a lot by a judicious use of these works. And on sound etymology depends all the fascinating superstructure of Linguistics—Semantics, Urgeschichte, Comparative Mythology etc.

### § 130. *Causes for the differences between phonetic laws of different languages.*

That there are different phonetic laws for different languages is a well known fact, but this is not due to any intrinsic inability of any people to pronounce any particular sound or set of sounds. There is no inborn ability (or disability) in a particular race to utter any particular sound. It is all a question of habit and practice.[1] It is well known, for instance, that a person habitually speaking one language feels "fatigued" if he has to speak another language. But this is due merely to a different set of muscles being brought into use and thus feeling the strain.[2] The special phonetic differences between

[1] *Individuals* may have a malformation of the mouth and the tongue and may thus be unable to utter certain sounds.

[2] Max Müller has recorded (op. cit., p. 206) that though he had lived longer in England than in Germany, still he felt fatigued if he spoke English for a long time but not at all if he spoke German. This he says was due to a "phonetic habit". I have noticed myself that an hour's lecturing in classical (i.e. standard) Gujarati fatigues me while a lecture of similar duration in English or in my own vernacular (Parsi Gujarati) leaves no effect. Such cases only indicate which particular language is habitually used by a particular person.

various languages are due to a large number of causes which have not yet been clearly analysed. In fact, it is at present only the opinion of certain scholars that climate, soil, and food as also the habits and customs of a people are determining factors in this matter. It has been maintained that the peculiar English intonation, especially of vowels as distinguished from that of (say) the Italians, is due to the damp climate of England. It would be well worth investigating these influences. The sounds made by the familiar animals would also seem to have some effect ; and there seems to be a germ of truth in the well known saying of the Emperor Charles V that he would use German " to talk to his horses ",[1] for among the European branches of the I.-E. family the Germanic tribes have used horses very largely.[2]

### § *131. Saving of effort is the root cause of phonetic changes.*

Whatever the causes, there is for every race a "phonetic habit " which develops in particular directions at particular periods. But there are certain fundamental principles which govern sound change in languages generally. Most languages have phonetic laws of harmony or of euphony which are often appealed to in order to explain certain sound changes. We are told that certain sound-combinations are " ugly ". But the word " ugly " is largely relative in its significance. A Greek never thought the combinations $\chi\theta$ or $\phi\theta$ " ugly' ',

[1] Charles V was the master of a large part of Europe and a fine linguist. He is reported to have said, " I speak German to my horses, Spanish to my God, French to my friends and Italian to my mistresses".

[2] I had heard in my boyhood that the characteristic glottal sounds of Arabic were imitated from the camel !

but Sanskrit has never allowed it. On the other hand a Greek would not have tolerated any final consonant except ν, ρ and ς, whereas in Sanskrit "almost all consonants occur as finals of roots, and every root is liable to be found, alone or as the last member of a compound, in the character of a declined stem".[1] So the only definition of "ugly" in this connection would be "that to which the people are not accustomed". Hence we must look deeper for sound change than "euphony" or "harmonious sounds". And this cause is *saving of effort*. This is not due to any laziness and does not imply any moral weakness. It is due to purely physical causes. It is often seen in a way exactly the reverse of what one would have expected, inasmuch as it may lead to intrinsically more difficult sounds being substituted for simpler ones.

### § 132. *Ways in which saving of effort may be effected.*

This saving of effort is seen in many and varied directions. And these are given diverse names by scholars. We may consider a few of these, viz., (*a*) Metathesis, (*b*) Prothesis, (*c*) Epenthesis, (*d*) Anaptyxis, (*e*) Haplology, (*f*) Assimilation and (*g*) Dissimilation.

(*a*) *Metathesis.* When we get a combination of sounds very often we find that they are interchanged. The reason for this is mostly carelessness of speech, though sometimes there is a clear easing of effort in pronouncing two conjunct consonants by changing their positions. As examples we may quote Av. *vafra* and Per. برف (*barf*) (vernaculars, बरफ), Skt. उन्दिर and Ben. इंदुर. Some-

[1] Whitney, *Sanskrit Grammar*, § 139*a*. But in derivative words there are but a small number of finals permitted in Skt. Conjunct consonants are not permitted as finals, in grammatical forms, nor, as a rule aspirates. (Whitney, op. cit., §§ 141-152.)

times both forms are used in the same language, e.g., we find the name of the city pronounced both as लखनौ and नखलौ, we have also in Skt. नारिकेल and नालिकेर, in Guj. डूबवुं and बूडवुं. Sometimes however a slight difference of meaning may be noted, e.g., Guj. टपकवुं (to drip) and पटकवुं (to throw down), also चरखा (spinning wheel) and चक्र (wheel).[1]

(*b*) It often happens that a word begins with a combination of consonants which are hard to pronounce. There is a distinct easing if a short vowel, usually an *i*, is put in front. This is called *Prothesis.* Thus, our vernacular pronunciations of the English words *school, station, stable* as इस्कूल, इस्टेशन and इस्तबल (or अस्तबल) are good instances. In some languages this is invariably found before all words beginning with a combination of *s* and another consonant. French and Persian are notable examples. Lat. *schola* gives Fr. *école* (school), Lat. *spatula* gives Fr. *épaule* (shoulder). In Pers. we get *istādan* (to stand) from an original Aryan form **stā* and *ustun* (pillar) from Ar. **stūn* ; *Plato* becomes *Iflātūn.*[2] This type of Prothesis is closely connected with Anaptyxis [3] and we may get anaptyctic and prothetic forms side by side. There is another type of prothetic vowel which does not seem to be due to an initial conjunct, such for instance are the Grk. words *'ανη'ρ* (Skt. नृ नर), *''ονομα* (नाम).

(*c*) Sometimes we find that some easing is needed in the middle of a word and hence a vowel is inserted in the

[1] Curiously enough in vulgar Gujarati the word चक्रम् is used for a "mad-cap" (lit., one in whose head the wheels are gone wrong?).

[2] See Platts and Ranking, *A Persian Grammar*, § 3 (*a*). The word अफलातुन is used in Parsi Gujarati in the sense of "magnificent" or "strong".

[3] See below under (*d*) of this section.

body of a word. This vowel is usually of the same quality (front or back) as the vowel or semi-vowel which immediately follows. This is called the *Epenthetic* or "anticipatory" vowel. This is seen very clearly in comparing Avesta words with Skt., "for epenthesis is one of the characteristic sound phenomena of the Avesta".[1] As examples may be quoted *bavaiti* (भवति), *airyō* (अर्यः), *mainyuś* (मन्युः), *auruṣō* (अरुषः), *haurva* (सर्व), *tauruna* (तरुण).[2]

(*d*) *Anaptyxis*[3] is called स्वरभक्ति by our grammarians. This is a vowel (not initial) inserted between two conjunct consonants. Thus very often we get anaptyxis instead of prothesis. Among our vernaculars Panjabi has developed this form of easing especially with initial conjuncts containing *s*, e.g., सटेशन for *station*, सकूल for *school*, सटूल for *stool* and so on. Anaptyxis is specially used in easing combinations with *r* and is clearly seen in comparing vernacular words with their Sanskrit originals; e.g., धरम for धर्म, परकार for प्रकार, भगत for भक्त, and so also from Pers. *khodā-bakhsh* (God-given) we get Guj. खोदाबखस.[4] In Sanskrit itself we find such forms सुवर्ण and स्वर्ण, पृथिवी and पृथ्वी. A variety of anaptyxis is the insertion of a *consonant* between two consonants to help in passing from one point of contact to another. This helping consonant serves often as a sort of consonant-glide. Examples सूनरी (Vedic Skt.) and सुन्दरी, Skt.

1 Jackson, *Avesta Grammar*, § 70.

2 Very often in the Avesta a prothetic vowel is also "anticipatory" and it may or may not be for the purpose of easing the pronunciation. Examples *irinaxti* (रिणक्ति), *urūpayeinti* (रोपयन्ति) *iθyajo* (त्यज-) Jackson, op. cit., § 71.

3 See Gune, *An Introduction to Comparative Philology*, p. 51.

4 The word is used usually for anything that comes "God-given", i.e., gratis.

वानर and Guj. वांदरो.[1] The insertion of the nasal in words like वांका (Skt. वक्र >Pkt. वङ्क), तांबडो (a water-pot made of copper, ताम्र) etc., is clearly in the nature of anaptyxis.[2] So also the word मुम्बद (an ointment said to be made out of a *mummy*) shows consonant anaptyxis. In the recitation of Avesta by present-day Parsi priests we find countless instances of anaptyxis.[3]

(*e*) *Haplology* occurs when in a word one whole syllable (i.e., a vowel plus consonant)[4] drops out. Such dropping happens most often if the syllable following the dropped one contains the same consonant. In English we have the *Welsh-rabbit* for *rarebit*, and it is also found working in the "portmanteau-words" *camelopard*, *cinematinée*, etc. The shortening of phrases in colloquial may be cited also as examples of haplology. In French we often hear *'spas* for *n'est ce pas* (is it not?), in English we have *isn't it*, in Gujarati मकुंजे (मैं कह्युं जे—I said that). Of course these are colloquial phrases, for in rapid speech such dropping of syllables would be very common. In borrowed words very often we find such shortenings, e.g., *Ashburner* becomes in Guj. आसबरन. And common names often show similar shortenings like नारण for नारायण and कनु for कनैया (कृष्ण).

(*f*) *Assimilation* as the name implies is the change of one sound into another in the neighbourhood so that both sounds may be produced from the same point of contact. This would be a distinct easing of effort. It can be

[1] पसिन्दो a vulgar dialect form of पसिनो (प्रस्वेद) is another instance.

[2] The Ben. हाँसपाताल (hospital) shows a similar nasal.

[3] E.g., *xṣnaoθra* is pronounced खश्नोथर, *xṣaθra* becomes खश्थर or even खशेथर, *fravaretas-cā* becomes फरेवरितस्चा and so forth.

[4] If only a vowel drops out it is called *syncope*.

*progressive* when an earlier sound affects a later or *regressive* (or "anticipatory") when a later syllable affects an earlier one. The change of Sanskrit words into Prakrit (or to put it more correctly from Old Indo-Aryan to Middle Indo-Aryan) is often characterised by assimilation. Thus we get पद्म (पद्म), दुग्गा (दुर्गा), धम्म (धर्म्म) etc. We also find it in Guj. लीलो (नील) "green", in Lat. *quinque* (five) from I.-E. **penque*. The rules of *sandhi* in Sanskrit are mostly examples of assimilation.[1]

(*g*) *Dissimilation* is the opposite process. Very often the repetition of the same sound is felt to be tiring to the vocal organs and relief is sought in changing the point of articulation. Skt. पिपासा gives Hin. प्यासा (> पिप्पासा), नवनीत gives Mar. लोणी (> नोनीत), Skt. पिपीलिका becomes Pkt. किपिल्लिका. In English *marble* (*marmor*)[2] *turtle*(*-dove*) as compared to Ger. *Turtur*(*-taube*) are good examples. In the ordinary reduplications of Skt. verbs we see dissimilation, e.g., तिष्ठ् from स्था, जिघ्र् from घ्रा, चस्कन्द् from स्कन्द्. Grassmann's Law is another instance of dissimilation.

## § 133. *Popular adaptations of foreign words.*

All these various forms of phonetic effort-saving are best seen when foreign words are adopted into a language and are gradually naturalised. Popular etymology is at work in all these cases, the main idea being that the sound of the naturalised word should adapt itself to the phonetic groups of the language. We have *artichoke* transformed into Bengali हाथीचोख ("elephant-eye"),

[1] Such rules as those about the change of न् to ण्, and the rules सो: शुना शुः, डुना डुः, and many others.

[2] Cf. Guj. संगेमरमर (from Pers. *sang-e marmar*).

*railway* in the Guj. of the middle of the 19th century became વેલવેલ.[1] I have heard *library* called *Rāe-bareli* [2] and *omlette* becoming મામલેટ or even *marmalade*. *Rhubarb* was rendered in Guj. a generation ago as લોહિબાગ.[3] But most amazing are the transformations of European proper names in the mouths of Indian servants. Mackenzie becomes મક્કનજી (butter), Ludlow becomes લડ્ડૂ (sweet-ball) and a colleague of mine at Benares, Macdermott, became દાલમોઠ [4] !

## § *134. Accent.*

In speech we neither utter all the words in a sentence nor all the syllables of a word in the same tone. Usually in a sentence we emphasise a particular word which we regard as important. Thus the sentence, "he shall go to-morrow to Bombay" might mean different things according to the different words on which stress is laid. Similarly in a word also a particular part is emphasised. Of course in monosyllabic languages of the isolating type a word has no component parts, but tones are employed to distinguish between words of similar sound.[5] Where, however, words are made up of a "root" and a "grammatical affix" either of these may take this emphasis and various phonetic changes take place in consequence. The

[1] A sort of double-assimilation. There was also the cross-influence of the pure Guj. word ગ્હેલ (from વહ્ ) which meant a bullock vehicle much used in the pre-railway days.

[2] An important town in the United Provinces.

[3] Popular-etymology is again at work here; લોહિ (blood) indicates the colour of the plant and also its blood-cleaning property and બાગ directly refers to the vegetable kingdom.

[4] દાલમોઠ is parched pulse fried in butter or oil and spiced with salt and pepper !

[5] See above Appendix A ( § 23 i.), pp. 105f.

emphasis thus laid upon particular parts of a word or a sentence is called *accent*.

### § 135. *Pitch and Stress.*

Accent may be of two kinds. One variety is called the *pitch* or "the musical accent" and the other is called the *stress*. In the pitch accent the voice is raised or lowered according as the syllable is accented or not. So that a language which has the pitch accent predominant sounds very "sing-song" to a stranger. In stress accent all the force of breath is spent on the accented syllable, so that the accented syllable sounds louder. The effect of a stress-accent language on the ear of a stranger is like that of successive blows of a hammer. Among languages with pitch-accent may be mentioned Vedic Sanskrit,[1] Homeric Greek, and most of the Indo-Aryan Vernaculars to-day. Among the stress-accent languages we may mention, English, Modern Greek,[2] Welsh, Persian and among the ancient languages Avesta and Latin. It must not, however, be supposed that when we speak of the accent of a language that the other variety is entirely absent from it. We mean only that one particular variety is predominant, and that its effect is most marked. It is also to be noted that languages seem to pass from one variety of accentuation to another, though the reasons for this change are not quite clearly understood. Thus, we know that Homeric Greek had a

[1] The very definitions of the accents in Skt.—उच्चैरुदात्तः। नीचैरनुदात्तः। समाहारः स्वरितः।—can only refer to the raising and lowering of the voice as with the pitch accent.

[2] I once heard an oration in Modern Greek by the late Prof. Delbrück. The effect on my ear was stunning. The accent, like blows of a hammer, was quite painful.

pitch-accent, while Modern Greek is very clearly stressed. We also may note that Bengali is at present developing a stress and so also the Parsi dialect of Gujrati.[1]

### § 136. *Effects of the stress-accent.*

The phonetic effects of these two varieties of accent are very different. With the stress-accent there is a tendency to reduce or to drop the syllables (i.e. vowels), in the immediate neighbourhood of the stressed syllable. The reason is quite obvious. The stressed syllable needs all the volume of breath, and thus leaves very little or none for its immediate neighbour. If the word is a sufficiently long one, there may be another subordinate (or secondary) accent developed. Thus, take the English word *literature* which has a strong stress on the first syllable, we find that the tendency is to drop the vowel in the second syllable and to pronounce the word "ˈlitəriʃə* "[2] [ˈलिट्रिच(र्)] as if it were spelt *litrature*. So also the word *extra-ordinary* has a strong stress on the *o* and is pronounced "eksˈtrɔ:dineri "[2] [एकस्ट्रोर्डिनरि]. Avesta furnishes a few good examples of the effects of the stress.

[1] This is clearly due to the Persian tradition of the Parsis, which has been strengthened by the growing English habit among them. However correct the Gujarati of a Parsi may be in grammar and idiom his accent (especially of a Bombay Parsi) generally sounds foreign. As a Parsi I myself have been able to catch more or less correctly the Bengali accent, but when I speak Hindi I am told that I "speak like a foreigner", although I speak the latter much more fluently and correctly than I do Bengali. The reason is that I am unable to imitate properly the Hindi accent. It may also be noted that when Hindi or Punjabi-speaking Indians talk English they do it in a "sing-song" fashion because some of their vernacular accent still clings to their speech.

[2] The pronunciations are as given in Daniel Jones' *An English Pronouncing Dictionary*. The Nāgarī transcripts are merely approximate.

The prevailing accent there is a stress on the penult as in *caθwārō* (Skt. चत्वारः), but when an enclitic *-ca* is suffixed the accent shifts reducing the long vowel to *a*: *caθwarás-ca* (Skt. चत्वारश्च). Another very good example is the Gāθic word *tā* (=Skt. पिता), the strong stress on the final syllable changed the Aryan **pitā́* to Av. *ptā́* and finally *tā́*.[1] So also the compound *tát-āp* (possessing falling water, i.e., full of rain) stands for *ptát-āp*, originally *patát-āp*.[2]

### 137. *Effect of the pitch accent.*

The effect of the pitch-accent is markedly different. It changes the *nature* of the vowel. Generally it tends to make a close vowel more open.[3] Thus *i* changes to *e* and *u* to *o* under the influence of the pitch accent. In the I.-E. parent language the accent shifts about in word-building and in form-building. In some it is on the root (or stem)[4] syllable, in others it is on the ending (or प्रत्यय). The original reason for this shifting of the accent must have been to indicate which was regarded as the more important component of the word. Of course each branch of the I.-E. parent-stock as it progressed developed its own accent rules, which often ran directly counter to the original scheme in the parent-language. Thus, in Sanskrit in the case of nouns the accent usually remains through-

[1] *ptā* is found Yas. xv. 11 and elsewhere also; and *tā* in Yas. xvii. 3.

[2] See Bartholomae, *Altiranisches Wörterbuch*, 631.

[3] Pitch is musical tone and the accented syllable has got more vibrations per second (is at a higher pitch) than the unaccented. As every singer knows a higher note necessitates a wide ropening of the mouth. This is probably the physical explanation of this change.

[4] The word *root* is used for verbs (तिङन्त), while *stem* usually implies a noun or pronoun or adjective (सुबन्त).

out on the same syllable.[1] In Greek there is developed the "trissyllabic law" which does not allow the accent to go beyond the third syllable from the end. But these particular laws have been later developments. The effects of the original shifting of the accent survive even though these new rules have caused the accent to shift again. It is these *original* effects that we consider mainly when dealing with the I.-E. languages. The effects are seen in what is called *vowel-gradation.*

### § *138. Vowel-gradation.*

We have seen above that in vowels we have two series —the front and the back. And with each series is associated a semi-vowel. Thus we get two series of sounds including at one end the semi-vowel and at the other the long diphthong. These are :

1. *e*-series : i̯, i, I, e (*ai), ai (*āi)
2. *o*-series : u̯, u, ū, o (*au), au (*āu)[2]

In Sanskrit grammar we know these as the संप्रसारण-गुण-वृद्धि series. Their mutual relations can be best represented as in the accompanying diagram. The gradations are here shown as steps,[3] on each step is indicated its name as well as its equivalent in Sanskrit Grammar.[4]

[1] Except with monosyllabic nouns or with such as are oxytons (i.e. have the last syllable accented). See Whitney, *Sanskrit Grammar*, §§ 314-320 for details.

[2] For the forms marked with asterisk, see above Chapter VII (§ 110), p. 240.

[3] German scholars call them "steps" (*Stufe*).

[4] It may be noted that the equivalents are somewhat different according as we consider the long-vowel series or the short-vowel series. The diagram is more or less for the short-vowel series which shows all the steps.

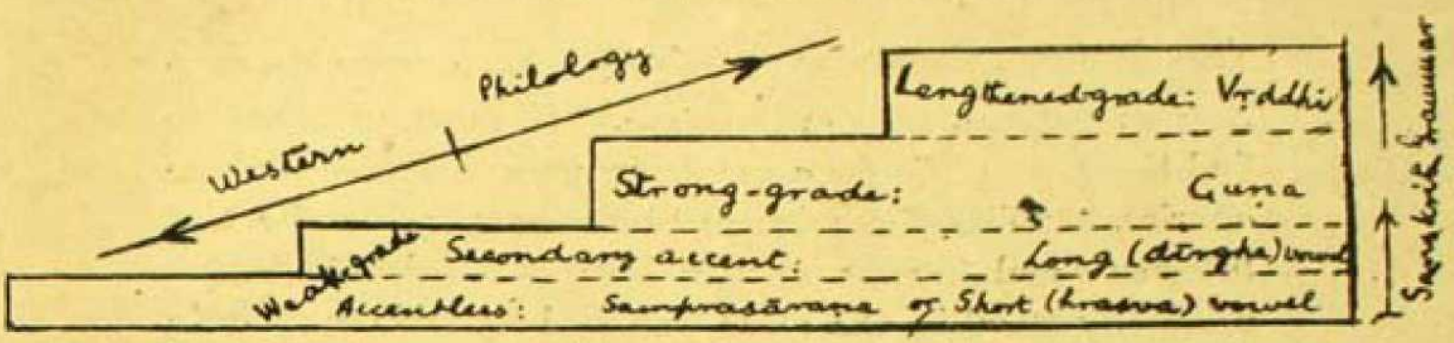



Fig. 18. Vowel-gradation

It will be noted that the "weak-grade" is subdivided into two sub-steps according as the syllable is entirely accentless or bears the secondary accent. There is one important difference in the way vowel-gradation is approached by Sanskrit grammarians and by modern Western scholars. The former look upon the "weak-grade" as the original and describe two other steps as successive strengthenings. The latter, however, regard the "strong-grade" as the original and take one step upwards for strengthening (i.e., वृद्धि) and one step downwards for weakening (simple vowel and संप्रसारण).[1] The facts described are exactly the same but the points of view differ.

## §139. *Ablaut.*

The word *Ablaut* means literally "change of the (vowel) sound". And almost all writers use the word in the sense of "vowel-gradation" as well. The change of vowel may be qualitative or quantitative. The changes noted under vowel-gradation in the previous paragraph are of the latter sort. But there is a *qualitative* change of vowels as well, the change from one series to another.

[1] This is very likely due to the comparative method, especially as the forms of roots considered from Greek and Latin are the 1st pers. sing. of the present, which are always in the "strong-grade".

This is best observable in Greek ;[1] e.g., φε'ρο : φο'ρος, λει'πω : λε'λοιπα, πατη'ρ : ευτπα'τωρ. In these instances we find the vowels of the *e*-series changing to those of the *o*-series. "The interchange between the *e* and *o* and between $\bar{e}$ and $\bar{o}$ seems to have been so regulated that $\breve{\bar{e}}$ originally stood in the chief accented syllable and $\breve{\bar{o}}$ in the next following syllable ".[2] The explanation offered for this change is that *e* being a front-vowel and *o* a back-vowel, the former has naturally a higher pitch than the latter. Hence when the accent shifts from an originally accented front-vowel, the latter is changed to the corresponding lower-pitched vowel of the *o*-series.[3] We also find in Greek a change from the *a*-series of vowels to the *o*-series ; e.g., Doric φαμι' : φωνη'. I personally desire to use the term Ablaut for the qualitative-change only and the term Vowel-gradation for the quantitative-change. Thus we would avoid needless complications and Ablaut would then have a meaning closer to its original sense. Hence we may assert that there is no true Albaut observable in Sanskrit, for here, as we have seen the original I.-E. vowels $*\breve{\bar{a}}$ $*\breve{\bar{e}}$ and $*\breve{\bar{o}}$ have become only $\breve{\bar{a}}$ (ऋ or ॠ).

### §140. *Vowel-gradation and Albaut in Indo-European.*

We have seen above [4] that vowel-gradation is one of the distinguishing characteristics of the I.-E. languages.

[1] In Sanskrit, as already mentioned above (Appendix B, § 16 (c), 1, p. 153), the three I.-E. vowels $*a$, $*e$ and $*o$ have fallen together, and hence the *qualitative* Albaut, as here described, is not observable. See remarks at the end of this paragraph.

[2] Wright, *Comparative Grammar of the Greek Language*, § 83.

[3] This is a mere tentative explanation. Wright says (loc. cit.), that " it is most difficult to account for this phase of ablaut ".

[4] Appendix B, § 1, p. 126, above.

Comparing the forms in various branches of this family we find that there are six series of vowel-gradation in the parent-language. These are named after the principal-vowel (i.e., the accented vowel) in the strong-grade. Each of these is subdivided into varieties according to the sound associated with (i.e., following) the principal vowel. These sounds are the semi-vowels ( $\hat{i}$ and $\hat{u}$ ), the liquids ($r$ and $l$) and the nasals ($n$ and $m$).[1] Thus we get the following varieties of vowel-gradation-series in the Indo-European :

A. Short-vowel series :

I. **e**-series. II. **a**-series. III. **o**-series.

Each of these may have the following sub-varieties: [2]

1. The vowel by itself.
2. The vowel + $\hat{i}$.
3. ,, ,, + $\hat{u}$.
4. ,, ,, + $\hat{r}$.
5. ,, ,, + $l$.
6. ,, ,, + $n$.
7. ,, ,, + $m$.

B. Long-vowel series :

IV. $\bar{e}$-series. V. $\bar{a}$-series. VI. $\bar{o}$-series.

Each of these may have the following sub-varieties :[3]

1. The vowel by itself.
2. The vowel + $\hat{i}$.
3. ,, ,, + $\hat{u}$.

[1] Only these three kinds are to be considered, for only these can be sonantised.

[2] The varieties of the *e*-series are the most important as well as most numerous.

[3] With long-vowel series the seven sub-varieties are theoretically possible but the three mentioned here are practically the only ones found. Rarely are forms found for the others.

In each of these there are three steps or grades : *weak*, *strong*, and *lengthened*. The weak-grade, as we saw above, (§ 138) is subdivided into two : *weak-grade* (1) (having the secondary accent) and *weak-grade* (2) (without any accent). In the other two grades we get besides the original vowel also the ablaut (qualitatively-changed) vowel. Thus we get in each series the following six varieties in the vowel-gradations table :

1. Weak-grade : (*a*) variety (2)—accentless.
   (*b*) ,, (1)—with secondary accent.
2. Strong-grade : (*a*) with original vowel.
   (*b*) with ablaut vowel.
3. Lengthened-grade : (*a*) with original vowel.
   (*b*) with ablaut vowel.

Of course, when the original vowel is long, the last two (3*a* and 3*b*) would be absent; and when the original vowel is $\breve{o}$, the ablaut grades (2*b* and 3*b*) would be wanting. Another point to be noted is that if tables are made of all these various series and if examples are sought for each of the varieties we would have to get them not from one but from a great many languages. And even then one root may not be able to give examples to fill in all the six columns.

### § 141. *Vowel-gradation in Sanskrit.*

In Sanskrit the six series of the I.-E. are reduced to only two, the ঋ series and the ঋা series. And we get

the following varieties :—

| | | | |
|---|---|---|---|
| I. | अ-series : | 1. | अ [अ] |
| | | 2. | अय्, ए [इ or ई] |
| | | 3. | अव्, ओ [उ or ऊ] |
| | | 4. | अर् [ऋ] |
| | | 5. | अल् [ऌ] |
| | | 6. | अन् [अन्] |
| | | 7. | अम् [अम्] |
| II. | आ-series : | 1. | आ [आ] |
| | | 2. | आय्, ऐ [ई] |
| | | 3. | आव्, औ [ऊ] |

In view of what has been said above with regard to the different points of view from which Sanskrit grammarians and Western philologists have looked at vowel gradation, it will be clear that the series shown in the table are from the standpoint of modern Philology. To make the position clear the Sanskrit grammarians' root-vowels are also given enclosed in square brackets. The table on the following pages would make the matter quite clear. It may be repeated that in the table the 'ablaut' columns are absent. The remarks give the necessary explanations.

| Series. | Weak-grade. (2.) Without accent. | Weak-grade. (1.) Secondary accent. | Strong grade. | Lengthened grade. | Remarks. |
|---|---|---|---|---|---|
| I. 1. अ<br>√पत्[a] | —<br>अपप्तत् | इ (*ə)<br>पित्सति[b] | अ<br>पतति | आ<br>अपाति, पातयति | a. The root according to modern philological ideas is given in the first column and the root as recognised by Sanskrit grammarians is indicated enclosed in square brackets.<br>b. Desiderative form from पत् ; Whit., Skt. Gram., § 1030. |
| I. 2. अय्, ए<br>√भेद् [भिद्] | य्, इ<br>भिद्यते | ई<br>विभीदक:[c] | अय्, ए<br>विभेद | आय्, ऐ<br>अभैत्सीत् | c. RV., vii. 86.6. |
| I. 3. अव्, ओ<br>√बोध् [बुध्] | व्, उ<br>बुद्ध:, बुध्यते | ऊ | अव्, ओ<br>बोधति, बुबोध | आव्, औ<br>अबौत्सीत् | |
| I. 4. अर्<br>√तर् [त्]<br>√भर् [भृ] | र्, ऋ<br>तित्त्[e]<br>भृत: | इर् (ईर्), उर् (ऊर्)[d]<br>तीर्ण:, तितीर्षु:<br>बुभूर्षु: | अर्<br>तरति<br>भरति | आर्<br>अतार्षीत्, ततार<br>अभार्षीत्, बभार | d. The उर् ( ऊर् ) comes in when in the neighbourhood of a labial.<br>e. Pres. pt., found in RV., ii. 31.2. |
| I. 5. अल्[f]<br>√कल्प् [क्लृप्] | ल्, ऌ<br>क्लृप्यते | —[g] | अल्<br>कल्पयति | आल्<br>काल्पनिक: | f. There is only one root in Skt. in this series.<br>g. These forms are wanting. |

| | | | | | |
|---|---|---|---|---|---|
| I. 6. अन्<br>√हन् | न्, अ[h]<br>घ्नन्ति, हत: | इन्<br>हिंसा | अन्<br>हन्ति | आन्<br>हानि:, जघान | *h*. This अ is in origin *n*. |
| I. 7. अम्<br>√गम्<br>तमस्[i] | म्, अ[i]<br>जग्म:, गत: | इम्<br><br>तिमिर: | अम्<br>गमिष्यति<br>अतमत् | आम्<br>जगाम<br>ताम्यति, ताम: | *i*. This अ is in origin *m*.<br>*j*. From √तम्, to faint. |
| II. 1. आ<br>√स्था<br>√दा | —<br>सर्व्येष्ठ[l]<br>दैवत्त:[m] | अ, इ (*ə)<br>स्थित:<br>दत्ते, दित:[n] | आ<br>तिष्ठामि, स्थातुम्<br>ददाति | [k] | *k*. In the आ-series lengthened grade is wanting.<br>*l*. सर्व्ये + स्थ् + इ.<br>*m*. For दैवदत्त; RV., i. 37.4 and viii. 32. 27.<br>*n*. Epic form. The form दिन is the same grade. |
| II. 2. आय्, ऐ<br>√गाय् [गै] | य्, इ | अय् (ए), ई<br>गेयात्, गीयते | आय्, ऐ<br>गायति | | |
| II. 3. आव्, औ<br>√दाव् [द्यु]<br>गाव् [गौ] | व्, उ<br>दुनोति, दुत:[o]<br>द्यिगु: | अव् (ओ), ऊ<br>दोष्यति, दूयते<br>पु'गव: | आव्, औ<br>अदीषीत्, दावानल:<br>गौ:, गाव: | | *o*. Only one occurrence is recorded, Śiś., vi. 59. |

# CHAPTER IX

## Some Considerations of Syntactical Growth.[1]

### § 142. *Language begins with the Sentence.*

We have already described in the first Chapter [2] how the power of drawing concepts from a large number of percepts characterises the human being and differentiates him from the average animal. We also saw that after these concepts are drawn human beings can communicate their thoughts to one another by putting two or more of these concepts together. This we call a sentence. This is the beginning of "language" as we usually understand the word. We have thus seen that *the sentence is the unit of language*, and that languages are classified according to their sentence construction.[3] We may now consider this question in some further detail.

### § 143. *Progress of an infant in acquiring language is an epitome of human linguistic history.*

It is a well-recognised scientific truth that the human child during the few weeks of its embryo state passes successively through all the important stages through which the human race has attained its present physical body. Similarly during the first few weeks of life the infant

[1] The substance of this chapter was communicated in a paper sent to the Fourth Oriental Conference at Allahabad held in 1926. It was entitled "The Main Lines of Language Growth".

[2] §§ 7-9, pp. 6-9 above.

[3] §§ 39ff., pp. 56ff. above.

acquires successively the various emotions which humanity has taken several hundred thousand years to acquire during its march onwards since the time it first emerged upon earth.[1] The gradual development of the infant mind is, as it were, an epitome of the history of the progress of the human mind. Exactly in the same way the acquiring of language observed in an infant would give us some idea of how humanity has progressed in attaining articulate speech.

### § 144. *Stages in the linguistic growth of an infant.*

The cry of a new-born child is merely a reflex due to purely physical needs. Feelings of hunger, discomfort, pain etc. call forth the cry automatically. There is no thought behind it, no object for which it is uttered. It, however, serves a definite purpose; it draws the attention of the mother (or nurse) and results in the removal of the cause which gave rise to it. Thus the cry and the removal of an unpleasant feeling are associated together in the child-mind. As soon the cry is invested with a definite object in view, with a meaning in fact, and we get the first beginning of language. But we cannot still call this "language." It may be called an *animal-cry* to distinguish it from the *reflex-cry* of the preceding stage. We find that many animals, especially those of the gregarious type, have a definite set of cries, which have each a definite meaning. This stage of animal-cries begins very early, within a few days of birth, and continues comparatively long. In fact, this stage lasts until the child has acquired considerable control over its vocal apparatus.

The child all along tries to imitate the sounds it hears

[1] See Drummond, *Ascent of Man*, for a very fine treatment of this aspect of human progress.

from others who attend to it. This gives the child control over the vocal chords and muscles and it gradually acquires facility in producing certain sounds which are most frequently heard.[1] But in the beginning the child has no idea of " words " as such. To the mind of the child each situation, as it arises, demands a set of sounds which it tries to imitate, but which it cannot analyse into its components. Every mother knows the unmeaning set of sounds she has to use for " baby-talk ". And babies are known to go on babbling at great rate, and often at great length, as if they were trying to make us understand what they have observed or thought of.[2] But the things they utter, though doubtless they have a meaning for the speakers, are mere unmeaning prattle to the elders. They may be called *sound-jumbles*. These sounds well forth spontaneously from the child in response to its feelings. We often observe even grown-up children when they are excessively happy crooning out unmeaning words to themselves.[3] They form the vocal expression of the child's emotions and they serve children pretty well even for carrying on conversations with one another. If there are a lot of young children in a family they often develop a language

[1] It seems that the simple vowels are first acquired and among consonant sounds the labials come first. Hence the earliest child words are *pā*, *bā*, *mā* etc. Jespersen in his *Language* gives a very exhaustive treatment of child-language.

[2] I had that experience with my son (aged nine months or so) one day. He had come back from his outing one evening and there he had seen (as I ascertained from the nurse) a procession with banners and music. This had evidently excited him and for half an hour after coming home he held forth to us about all he had seen and heard. He had, indeed, given us a " baby-lecture ".

[3] The same idea is conveyed by Kipling about Mowgli's song when he had slain Sher Khan, " a song that came up into his throat all by itself " (*Jungle-Book*, the story of " Tiger, tiger ").

of their own, which is their own cherished secret, and to which elders are admitted only if they are "very good" and as a mark of special favour. These baby-languages at first are mere "sound-jumbles", and even after children learn the use of words they may go on coining new words.

All this time the human brain the child possesses goes on developing and soon after the "sound-jumble" stage, the sense of separate words begins to dawn upon it. Of course the child draws its own common factors from a number of sense-impressions, and invents its own sounds to indicate these. In other words it begins to have concepts and begins to grasp what words may mean. The elders would be necessarily helping the baby at this stage by uttering individual words and pointing out the object. As soon as the power of thought (drawing of a concept from percepts) is exercised, further progress is assured and is naturally easy. This stage is seen to begin in the child when it begins to use *articulate words*. And from that period onwards it is merely a question of time.

One important fact is to be constantly borne in mind, viz., that all through this process of acquiring the language the child *thinks in sentences*, never in individual words. It is also remarkable how a child can acquire more languages than one simultaneously, and very seldom are the languages (i.e., the sentence-construction) mixed up, though words may be confused.[1]

[1] This is the principle lying at the bottom of the "direct-method" of teaching languages. The idea is to teach the learner *to think* in the language. The vocabulary is gradually acquired and *grammar comes last of all*. That was the reason why the Greeks never taught nor compiled the grammar of their own language. It was unnecessary.

### § 145. *Primitive speech*: (*i*) *the Animal-cry stage.*

From the above considerations regarding the linguistic growth of the child, we may confidently draw some conclusions about the primitive speech of humanity. Of course, anything in the nature of a record of that stage is an utter impossibility. But we may be justified in assuming that just preceding the emergence of *Homo Sapiens*, the human being must have uttered mere animal cries. These cries variously modulated may have acquired definite meanings. These may have been accompained by gesture to a greater or lesser extent.[1] How long this stage lasted it is difficult to say. But as soon as *Homo Sapiens* comes on the stage we get language in the correct sense of the term, inasmuch as from now on there is a thought—a purpose—behind the sound uttered. Rightly has Marett said that man "tried to make a speech as soon as he had learnt to stand on his hind legs".[2] The meaning of this is that the upright stature of man is accompanied certain developments of the brain—both as regards the size of the brain cavity as well as the quality of the grey matter. These latest developed parts of the brain are those that control the speech centres.[3] And side by side with the

[1] The development of gesture language is a parallel growth and is equally primitive. Gesture language is a common possession of all humanity and is universally understood. Among some tribes of the North-American Indians, however, it has attained very great development. It seems likely that there was a period of humanity when animal cries were helped on with gestures, but I do not think that there was a period when only gesture was used and humanity was completely dumb.

[2] *Anthropology*, p. 132.

[3] Consult F. W. Mott, *The Brain and the Voice in Speech and Song*. There is a good diagram (fig. 17) facing p. 74 of the book showing the "speech zone" in the human brain and a good explanation of it is given on p. 74.

power of speech there arises also the power of drawing the concept.

### § 146. *Primitive speech*: (*ii*) *the Sound-jumble stage.*

The animal-cries of primitive "man" would necessarily have been confined purely to the expression of animal instincts—hunger, sleep, fear and sex impulse.[1] And at this stage, indeed, they do not deserve the name of speech, nor should the utterers of these cries be dignified by the name of human beings. Humanity really begins with the upright stature and the control of speech organs. The power of thought, which goes with the power of speech, is also now present, but *it is latent*. It is by generations of development and by the continuous exercise of this faculty that the power of thought develops enough to give words to a language. And just as we saw in the case of the infant, humanity, too, has passed through the sound-jumble stage. Luckily we possess among the languages of the world to-day such "sound-jumble" languages, which, as might be expected, are used by the most primitive human beings living at present. These primitive human beings certainly possess the *latent capacity* of drawing concepts from percepts, but this has not been developed, just because their lives are practically confined to the four animal impulses enumerated above and so the need of articulate expression of their feelings is also strictly limited. Of course, they are constantly receiving sense-impressions from their environment but the need of putting these into words would arise but in a few cases. With this limited linguistic need these people are quite able to live their

1 आहारनिद्राभयमैथुनं च सामान्यमेतत्पशुभिर्नराणाम्।

lives in the " sound-jumble " stage with one " sound-jumble " for each individual sense-perception they need to express in words. The people of the utterly remote " end of the world ", Tierra del Fuego, do possess a language made up of " sound-jumbles ", each one representing a *percept* and this language has never a concept and hence no " word ". If one of the people of this region sees a fish and then he catches the fish, his wife cooks the fish and the family eat the fish and they find the fish tastes nice, then, for each of these five sense-impressions, he would use an absolutely independent sound-jumble. Not one of these five would have the faintest suggestion of having something in common (in the present case, " fish ") with the rest. Their minds have had no practice in drawing these common factors from sense-impressions (in other words, concepts from percepts), hence each of their " sound-jumbles " is an independent unit. The slightest change in the sense-impression, if, for instance, he sees two fishes instead of one, would necessitate an entirely distinct " sound-jumble ". Each utterance of these people, in short, represents *one single perception taken as a whole in all its details.* These may be sometimes quite complex. Thus, Marett quotes from the language of these same people the remarkable " sound-jumble", *mamilhapinatapai* which means " two-people-are-looking-at-each-other-hoping-that-either-will-offer-to-do-something-which-both-desire-but-are-unwilling-to-do ". [1]

### § *147. Primitive Speech* : (*iii*) *the Holophrastic stage.*

Marett describes the language ofthe Tierra del Fuegians as " holophrastic " or " incorporating ". In it each utter-

[1] Marett, op. cit., p. 140.

ance (one could hardly call it either a " word " or even a " sentence " in the strict sense) consisting of a number of sounds, " into which are packed away enough suggestions to reproduce the situation in all its detail, the act, the person who did it, the instrument, the time, the circumstances, the place, and who knows what besides ". [1] I would rather reserve the term " holophrastic " to the slightly more advaneed stage of language and call the most primitive by the term " sound-jumble ". The very definition as given by Marett implies that each of the component parts is felt (however dimly) to be a *separate* concept. But such is not the case with the language of Tierra del Fuego. The true stage of holophrase would begin when once there begins the dim perception that the whole situation is capable of being analysed into component parts such as the act, the actor, the time, the place, the circumstances etc. Then one would begin to group together the various components perceived in various sense-impressions and the first step towards the drawing of concepts would be taken. The latent power of thought (the λο'γος) in the human brain would then be stirred and we would get more rapid progress. Among the languages of the world we have most of the American languages at this stage of development. Thus in the Old Huron-Iroquois language we get the following holophrases :

*eschoirhon* (I-have-been-to-the-water);
*setsonha* (go-to-the-water);
*ondequoha* (there-is-water-in-the-bucket);
*daustantewacharet* (there-is-water-in-the-pot).

Here though the stranger fails to discover any common factor in the actual *sounds* uttered, still the speakers are

[1] Op. cit., p. 140.

quite aware of the common factor—the concept, " water ". This is proved by the fact that they have an independent " hypothetical word " for " water ". By this is meant that the word (*awen*) is recognised in the language as the label attached to the concept " water ", but it is never used either by itself or in a sentence. This is the earliest stage when there is the recognition of the concept and there is a label (though hypothetical) attached to it.

The next step forward is where this common factor is also realised as a common factor in the spoken sounds. Here we get full holophrase. Thus, in the Cherokee we get *nadholinin* (bring us the canoe) which can be analysed into the full concept-words **na***ten* (bring), *amok*-**hol** (canoe) and **nin** (we).[1] This is true " holophrase."

## § *148. The Word-stage of language.*

After this stage comes the full word (the शब्द) which is the label of the concept. It requires generations of steady mental growth to reach this stage. Those of us who possess fully developed languages find it hard to realise how a language can exist without words. And even when words come they are at first but names of concrete concepts. And even these concrete concepts are not what we may term " pure". There are many concrete objects of possession which the primitive mind cannot conceive of as apart from the possessor. Thus there are distinct words in many languages for " my hut ", " your hut ", " his hut ", " my father's hut", " his neighbour's hut " and so forth but no single word for "hut". This is but one way in which the " percept " goes on persisting. Though considerably narrow in comparison to the " sound-jumble " stage, the

[1] Op. cit., p. 141.

percept of the thing possessed still remains intimately bound up with the possessor. So also the concept of number does not exist apart from some concrete objects enumerated. Thus we notice the curious fact with many primitive peoples that though they cannot count (in the *abstract*) beyond four, they can accurately enumerate quite a large number of specific objects, such as cocoanuts or shells.

### § 149. *The process of drawing concepts is continuously going on in language.*

The use of the power of thought (the concept faculty) does not stop with the emergence of words in a language. The human mind goes on continuously grouping and regrouping its percepts and concepts and goes on drawing new " common factors " from these fresh groups. Thus new concepts—new words—go on arising. First, as we saw, these indicate concrete material objects, but they are not quite pure. These may be called " compound concepts "—when two or more items are grouped together as one single concept. Such for instance are the words which indicate the possessor and the thing possessed, the object and its number, the verb and its subject. In short, the holophrastic stage continues for a considerable time even after " words " have come. But the constant regrouping that is going on in the minds of the speakers results in a continuous analysis of these compound concepts and they gradually break up into their component parts.

Still the concepts are strictly material and concrete. The abstract concepts come much later, and probably these also pass through a stage of "compound abstract concepts ". The history of thought in any great nation could give ample evidence of the growth of these abstract

concepts. The use of metaphor in language, especially in case of words denoting abstract ideas, is sure proof of this gradual growth.

### § 150. *The three types of sentences.*

Leaving now the growth of abstract terms, we may come back to the sentence. Sentences, as we understand them, begin with the " word-stage ". Every sentence in its simplest form must contain two concepts expressed or implied, or otherwise understood from the " logic of circumstances". Thus if a person suddenly comes into a room and says, " Dog ", he would be naturally asked, " What about it ? " But if a visitor comes into the room and the master says to the servant, " Chair ", the circumstances convey the full sense. This is the simplest type of sentence, when two concepts are joined together. Usually one of them is known to both the speaker and the hearer and the other is what conveys fresh information to the hearer. The first is the *subject* and the second is the *predicate.*[1] From this simple beginning we get more complex types of sentences. Thus, instead of one "subject" we may have several and they may be connected with one or more " predicates ". And in such complex sentences several of the subjects may stand in different relations with the predicates.

We have therefore to consider how these different types of relationships of the subject and the predicate in a sentence are to be indicated. And according to the method employed we get the three types of sentences— (i) Isolating, (ii) Agglutinating and (iii) Inflecting.

[1] It is to be carefully noted that these two words are *not* to be understood in the grammatical but in the *psychological* sense.

These three are the only types known to us and any particular language represents one type predominantly. We have already seen the distinctions between these three types and these need not be repeated here. [1]

### § 151. *These three types are not connected.*

The older writers on philology had a theory that these three types (Isolating, Agglutinating and Inflecting) were three stages in the progress of languages and that the Inflecting type passed again into the Isolating. This theory seemed to round off everything so well that it continued to be believed till quite recently. It was held that primitive language was isolating in structure and it gradually passed into the agglutinating stage through some words (the so-called empty-words [2]) being regarded as suffixes in course of time. The agglutinating suffixes would thus in turn fuse into inflecting-suffixes. The inflections finally would in course of time "decay" and give us back the isolating stage. But there is not a scrap of proof for this theory. As far back as we can trace each type of language we see it has never been anything else. So it would be more reasonable to suppose these three types as having arisen simultaneously.

### § 152. *The Isolating type.*

In this type of language all relationships are indicated by position. And the growth of concepts (especially of

[1] Chapter III above. It will be noted that there the Isolating (or Inorganic) type is given as separate from the Organic type which includes (α) Holophrasatic, (β) Agglutinating and (γ) Inflecting, this is because the question is not considered there from the point of view of evolution of language.

[2] Such as exist in Chinese, see above, p. 110.

the abstract concepts) can be very well illustrated by comparing together the Sudan languages of Africa and Chinese both of which belong to this type. The former are completely lacking in prepositions. [1] There are only three syntactical relations which can be "naturally" expressed by position without the help of other words. These are the relationships of (i) subject (agent) and verb, (ii) object and verb and (iii) possessor and thing possessed. When other relations—such as instrument, location etc., are to be expressed these have to be paraphrased in terms of the three mentioned above. Hence the roundabout periphrases needed to express what to us seem very simple sentences. In Chinese on the other hand the "prepositions" are fully developed and these help to fix the relationships accurately. Now these little words express very abstract concepts relating to the connections between concepts (i.e., relating to syntactical connections). And the primitive speakers of the Sudan languages have not risen to that height, which the far more civilised Chinese have attained.

### § 153. *The Agglutinating type.*

This type includes the greater number of the languages spoken in the world to-day. These are only second in importance to the languages of the inflecting type. In this type the relationships between the parts of a sentence are indicated by formal elements (either prefixes or suffixes) and in most cases there are as many of these as there are relations or modifications needed to be expressed. Thus, if we have to express the idea of genitive singular, there would be two

[1] See p. 88 above.

suffixes needed, one for indicating singular and the other for possession, and in the genitive plural the first suffix would indicate plurality and the second would remain the same as in the singular. This gives to the agglutinative languages a clarity of expression which constitutes their marked feature.[1] The syntactical relationships are, as it were, analysed and each of them receives appropriate expression in an affix. Whether these suffixes were originally independent words (as some maintain) or not might be left an open question because there is no positive evidence about it. In the better developed of these languages the prepositions are also fairly well developed.

### § 154. *The Inflected type.*

This type is in many aspects the most important, for to it belong the most highly developed languages as well as those possessing the finest literatures. There are three "families" of these languages—Hamitic, Semitic and Indo-European, and evidence seems to be gathering that all these three may have been descended from a common stock. Confining ourselves, however, to the Indo-European languages only we see some remarkable points. In these languages the syntactical relations are indicated by suffixes which are found in great variety. Many of these indicate some very complex ideas. In fact it seems as if the early suffixes denoted a set of complex syntax relations. We may almost call these "*percepts* of syntactical relations" and each suffix expresses only *one* of these even though it may be a complex one. Not only that, but a slight change in it (for instance from singular to plural) demands a complete

[1] See examples given above at pp. 63-65.

change of the suffix. This is the main reason for the large number of grammatical suffixes found in the Indo-European languages. Each of them represents a complex percept of syntactical relations.

### § 155. *The rise of Prepositions, etc.*

As language progresses these suffixes form groups together and these groups give rise to new concepts which may get new labels. These latter would express abstractions and some of these would express very elusive relations. These are what we call in grammar prepositions and other modificatory particles. Take for instance the three English sentences : " I cut fruit *with* the knife," " He took a walk *with* my friend" and "I walked out of the shop *with* the book ". In these we have an idea expressed by the " with " which is a common factor in all the three, but it is somewhat difficult to catch this common idea, which is "accompaniment of the action ". In many languages these three sentences would be expressed by the use of three different case-endings. Even in Sanskrit, though there may be only one used (the instrumental), still for the last it would hardly be called idiomatic Sanskrit, and the use of सह in the first would be regarded as wrong. In idiomatic Skt. these would be : (i) कर्तया फलमक्रन्तम्, (ii) मित्रेण सहाभाष्यम् and (iii) पुस्तकं गृहीत्वा पथाभिष्क्रान्तोऽहम् . It does, indeed, take a long development in thought processes to arrive at the prepositions and other *avyayas*. The Indo-European languages even in their early period are very rich in words of this type indicating that the people using these had attained a level of thought much higher than that of mere savages.

### § 156. *Auxiliary verbs.*

What we saw above, was with reference to nouns, pronouns and adjectives. With verbs the syntactical relations refer to what are called tenses and moods, i.e., to the time and the manner of the action. The state of mind of the speaker or actor is also sometimes considered. All these varied relations are expressed in the older Indo-European languages by different verbal suffixes. But in course of time the finite verb[1] is replaced more and more by participles, infinitives and auxiliary verbal forms. This change is very well exemplified in the history of English and in that of the Indo-Aryan vernaculars as compared with Classical Sanskrit. The auxiliary verbs were originally independent finite verbs like the rest, but with the grouping together of the senses of the various moods and tenses they came to acquire a new meaning and fresh functions.

### § 157. *From Synthesis to Analysis.*

This process of analysing the syntactical relations is doubtless helped by the fact that a good many of the finite forms of the moods and tenses in the older languages (like Sanskrit, Latin and Greek) differ only by fine shades of meaning. So they would tend to overlap and get confused with each other. It is often hard in the older texts to say exactly why a subjunctive, or an optative, or an imperative has been used or why an aorist or a perfect. Similarly with the cases it is often difficult to know the reason why a particular case has been used

[1] The forms of the "tenses" and "moods" of a verb are called "finite" as each of them has a definite meaning.

in place of another. This overlapping of meanings between different forms caused a good deal of confusion in the syntax,[1] and simultaneously the prepositions and auxiliaries which had already come into use acquired a clearer meaning. Thus the transition from the syntactic stage (where the syntactical relations were indicated by *putting together* [2] the root and the ending) to the analytic (where these relations were *analysed* into more or less fundamental concepts) was achieved. Every language passes through this change. With some the change is extremely slow because the progress has been retarded by geographical isolation and other causes. With others the change has been extremely swift because there has been early contact with other languages.

### § 158. *Examples of this process* : (*i*) *Lithuanian.*

Among the I.-E. languages to-day Lithuanian shows a nearly complete synthetic structure and it can best be compared to Vedic Sanskrit. This means that this language has remained practically stationary during the past three thousand years or so. The reason for this is seen in the nature of the land itself. It is a country full of fever-ridden swamps and impenetrable forests. The slight extent of sea-coast it possesses is not of much use for commerce because the sea is frozen for more than half the year. Besides, the country is not particularly rich in any kind of produce which would tempt a foreign

[1] The syntax of the *Brāhmaṇas* in Sanskrit is extremely interesting from this point of view. So also the syntax of the *Vendīdād* shows the transition from the synthetic to the analytic stage. Contact with foreign languages was doubtless the hastening cause in both cases.

[2] This is the literal meaning of *synthesis*.

conqueror. So Lithuania has been left alone as it were and has had but little contact with outsiders. It came nominally under the domination of Russia, but even then the land was not attractive enough to induce the rulers to settle down there.

### (*ii*) *Hebrew and Arabic.*

These two languages are very closely related and they had practically the same synthetic structure about two thousand years ago. But to-day Hebrew is much more advanced on the analytic stage than Arabic. The Jews have been a persecuted race during these centuries and having left their original land they have wandered all over the world. Being deeply religious they have preserved their sacred texts, but in their daily life they were perforce] obliged to speak the language of the land they lived in. So their own colloquial Hebrew got very mixed up and became analytic in form.

The Arabs, too, spread over all the lands of the Old World, but they went everywhere as conquerors who imposed their language and religion upon other vanquished people. Their religion, too, was a great binding and conserving force and the Arab rulers of different lands formed a strongly united body, which fact also helped the preservation of the language.

So the two languages have had different histories, even though both the people were deeply religious, because the one spread over the world as wandering fugitives, the other as conquerors.

### (*iii*) *Persian.*

The history of Persian is also quite instructive in this respect. The language of the Achaemenian Inscriptions—

Old Persian—is fully synthetic and pretty close to Sanskrit in structure. That was the period when the Achaemenians were the rulers of a vast empire and their political centre was at Persepolis—the heart of Aryan Persia. These two facts tended to preserve the court language (in which these inscriptions were composed) more or less pure. Doubtless the language of the masses must have been undergoing change owing to contact with the various races in the great empire. Then came the Macedonian conquest which put an end to the domination of Persia for nearly five centuries. And the political centre of gravity was also shifted. We come upon Persian language again in the beginning of the Sasanian period and then we find it in the Middle Persian stage. During the two centuries preceding the rise of the Sasanians the political centre of Iran was definitely fixed in Mesopotamia—at Ctesiphon. And this city continued to be the capital of the Sasanians as well. Hence the Middle Persian, as we get in the beginning of the Sasanian period, is already a language well advanced towards the analytic type with a considerable borrowing of words from the Semitic languages. This Semitic influence continued all through the centuries of Sasanian rule and soon after the Islamic conquest we find modern Persian emerging—the most completely analytic of all the Indo-European languages.[1]

[1] So very little of "formal grammar" is left in Persian that all of it can be written down on a sheet of note paper. See the "Epitome of the Accident" given at p. ix of W. St. Clair-Tisdall's *Modern Persian Conversation Grammar*.

# CHAPTER X

## Form-Building and Word-Building.

### § 159. *Parts of Speech.*

Pāṇini has made a clear differentiation between the terms *śabda* and *pada* in his *sūtra* सुप्तिङन्तं पदम् (i. 4. 14). *Sabda* in Skt. means the word, i.e., the label attached to a concept, while *pada* is the *śabda* used in a sentence.[1] Thus *pada* is *śabda* plus the grammatical suffixes. Of course in languages of the isolating type these two are identical. In these languages the word denotes the root-concept, and the part of speech to which it belongs is usually seen from the context, i.e., from its position in the sentence. Very similar is the case with languages of the other two types when they have reached the analytic stage. In short there is nothing inherent in the *śabda* (or the concept) which could determine its part of speech. Thus take a word like " mother ", the word could be used as a verb, as in the sentence, " the cat mothered the helpless puppies ". And there is the famous quotation from Shakespeare,

> " But me no buts, but tell me the whole truth,
> " I want nothing but that "

where we find the word "but" used as four different "parts of speech".

[1] See my article on "Pāṇini's 'Parts of Speech' " in the *Calcutta Review*, July, 1927. In English we may call *śabda* the "root-concept" and *pada* the "grammatical form" (the word as actually used in a sentence).

### § 160. *All words are not root-concepts.*

Somehow we have got the idea that words (concepts) are to be divided into the few categories of grammar which we call "parts of speech". We need not here enter into the merits of the classification of these as found in our English grammars. In a fundamental sense it is indeed true that there is nothing inherent in the root-concept which determines the part of speech. But we find that dictum strictly true only in the case of isolating languages. Usually, however, in our inflected languages we are correct in assigning most words in our lexicons to their appropriate parts of speech. The reason for this is that a very large number of the "words" in our languages are *not* root-concepts. They are derivatives from the root-concepts made up by adding to them certain formative affixes. Thus the lexicons of languages of the inflected type have two classes of words : (1) the root-concepts and (2) the derivatives from these. The latter are numerically by far the more numerous.[1] In the isolating languages, on the other hand, the lexicons have words which are only concepts, either root-concepts or derived-*concepts*, and the latter are necessarily not very numerous.[2]

### § 161. *Roots and their derivative forms.*

The main characteristic of inflected languages is that they can be analysed down to *roots*, which are the fundamental concepts and from which all their wealth of words

[1] In Sanskrit there are only about 800 root-concepts out of which many thousands of words are built up.

[2] This explains, why the biggest Chinese dictionary has only 42,000 words as compared with, say, the *St. Petersburg Dictionary* (of Sanskrit) or the *New English Dictionary* which contain a far larger number.

is gradually built up. These roots are originally material concepts, usually indicating activities of the human body.[1] With the progress of the race and their development in thought these material concepts gradually give rise to abstract concepts and new concepts are built up by fresh regroupings. The very fact that these derivatives are denoted by certain definite suffixes and prefixes gives a sort of clue to the re-arrangement of the groups. It is also quite probable that these suffixes and prefixes were originally themselves concepts, i.e., independent words which combining with the others gave a new compound concept. Phonetic decay may have been responsible for the reduction of these into merely monosyllabic suffixes and prefixes.[2] With further progress in the language the derived words themselves are further developed into still other concepts by means of other suffixes. Thus we get two types of word-building suffixes in the Indo-European type of inflected languages. These are (*i*) the *Primary* ( कृत् ), which are added direct to the root and (*ii*) the *Secondary* (तद्धित) which are added to forms already derived.

### § 162. *The elements building up Indo-European languages.*

Thus we see that the inflected languages with which we are concerned are made up from a limited number of *root-concepts*. From these are derived the primary derivatives and from these again the secondary derivatives. These belong to the *word-building* elements of the language. But we have seen already that for building up

[1] See p. 9 above.

[2] This seems somewhat contradictory to what has been stated above in § 151 (p. 299). But the remarks made there apply to *grammatical* suffixes only. This point is made clear further on.

of sentences (the units of language) words (whether root-words or derivatives) are put together and their mutual relations are indicated by means of other suffixes which may be called "grammatical-suffixes".[1] These last may be called the *form-building* elements. These make up the original syntactical apparatus of these languages and form part of their original inheritance. These have not been added to in any of the branches.[2] Many of the word-building suffixes also are parts of the original inheritance and some of them (such as the adverbial suffixes)[3] are closely connected with the grammatical ones. But many new word-building suffixes have been of later growth in individual branches of I.-E. languages which are unknown to the other branches. Examples of these latter are *-hood, -dom, -ly* in English. These varied elements can be arranged in a tabular form.

### § 163. *The various kinds of affixes.*

It can be seen quite clearly that the sentence may be analysed, in the first instance, into a number of grammatical forms (*pada*). These latter in their turn can be seen as made up of a word (or root) plus one or more grammatical (form-building) suffixes.[4] Words (*śabda*) themselves can be analysed and these are found to be

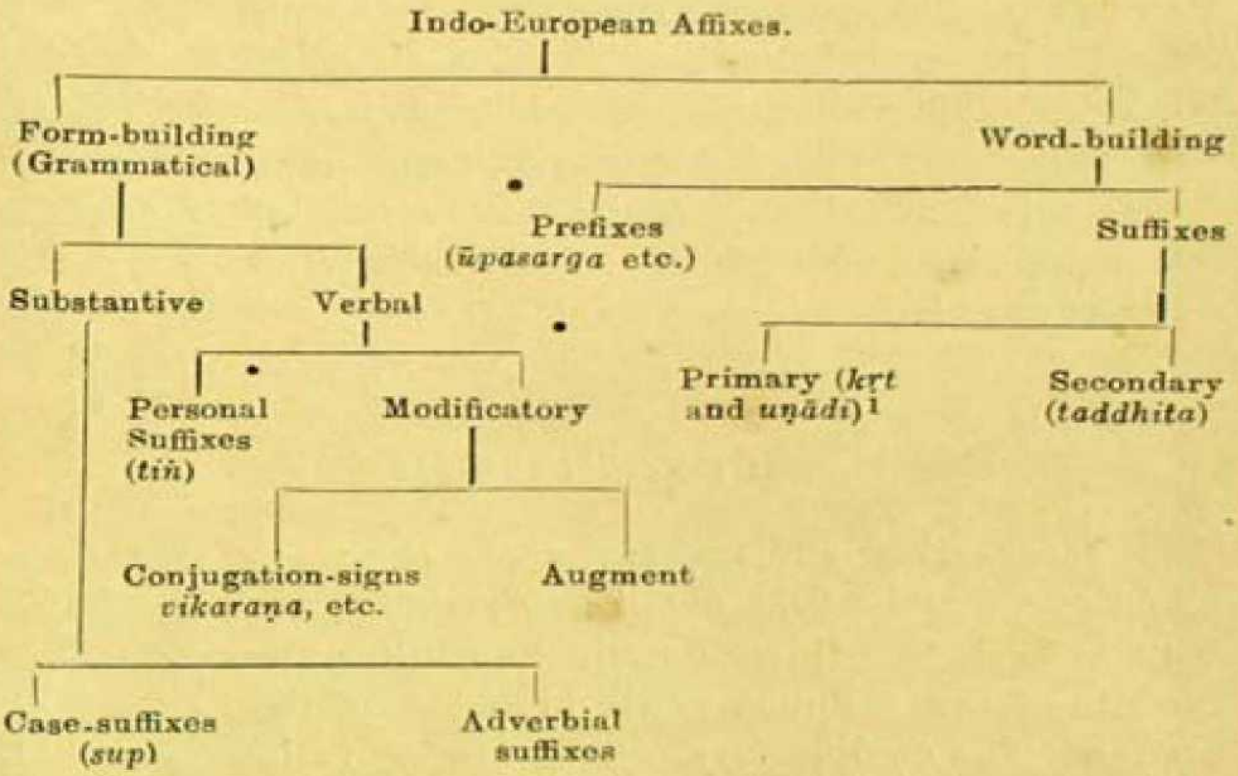
[1] There are no grammatical *prefixes* in I.-E. languages. See above, Chapter III, § 47 (pp. 71f.).

[2] New grammatical forms have, indeed, arisen in individual languages but they have been periphrastic in origin, like the future forms ( कर्तास्मि ) and the periphrastic perfect (कारयामास) etc., in Sanskrit.

[3] Such as -तः (found in यतः, कुतः etc.) which is clearly connected with the suffix of the ablative case.

[4] In the I.-E. languages there are no grammatical prefixes. The augment *a* of verbs is not so much grammatical as modificatory.

built up from roots with the addition of word-building affixes. Thus the ultimate analysis of the I.-E. languages yields roots and various kinds of affixes. The types of the latter are seen in the table below :




§ *164. Form-building suffixes*: (*i*) *Substantive-suffixes.*

In the Indo-European languages there are no grammatical or form-building prefixes as in the Semitic languages. There are suffixes essentially of two kinds only, substantive and verbal. The adverbial suffixes have originally the same signification as the case-suffixes. "There is no ultimate difference between such suffixes and the case-endings in declension ; and the adverbs of this division (i.e., derivative

[1] The *uṇādi* suffixes are also included here (see Whitney, *Sanskrit Grammar*, §1138*a*).

adverbs) sometimes are used in the manner of cases".[1] This close connection between case-endings and adverbial suffixes may have been due to the latter being variant forms of the former. In Sanskrit such adverbs are often used as cases, e.g., तस्मात्प्रेतकायत: (from that dead body); यत्र काले (at the time when), पथो देवत्रा यानान् (paths leading to the Gods), कुतश्चिद्देशात् (from some country). Then again many of the modificatory words (*avyayas*) in Sanskrit are actually case forms of nouns, e.g., चिरात्, सहसा, शनैः, सकाशात्, पादौ, रहसि etc. Hence Pāṇini has very rightly classified these words as a variety of substantives, and he says that the *avyaya* is in essence a *suḅ-anta*.[2]

### (*ii*) *Verbal suffixes.*

The verbal suffixes are of two sorts : (*a*) personal endings and (*b*) modificatory-suffixes. The former are called the *tiṅ*-suffixes in Sanskrit grammar. These endings are common to all branches of the I.-E. languages. The modificatory-suffixes are of various sorts. In the first place they denote certain tenses and moods. Thus there is the *-ya* for passive, *-sya* for future, *-aya* for causal, *-sa* (or *-iṣa*) for desiderative, and so forth. There is another type of modificatory-suffix, usually called *vikaraṇa* by Sanskrit grammarians. These are found in Sanskrit mainly in the Present and the Aorist systems. These are called the "conjugation-signs" specially with reference to the "present" system. In that system

[1] Whitney, op. cit., § 1097 *a*. In Greek also there are "local endings" for forming adverbs, like *-θι*, *-θεν*, *-δε* etc. The words thus formed are used exactly as cases of nouns, e.g., *οἰκο-θεν* (from home), *βι'ηφι* (with violence).

[2] Cf. Pāṇ., ii. 4.82, etc.

are found the ten classes of roots, each distinguished by a particular sign. The roots in classical Sanskrit are usually conjugated in one class only. Sometimes there are roots which belong to more classes than one, and occasionally the meaning also changes with the change of class.[1] In the aorist, too, similar classes are observed.

Comparing these *vikaraṇas*, with similar modificatory signs in the other I.-E. languages some remarkable points are noticed. The parent I.-E. language seems to have possessed no less than thirty-two such signs as enumerated by Brugmann. Originally they did have a modificatory meaning based on delicate shades of meaning. Thus the root *yu* (to join), gave a derivative *yu-dh* (to join in battle) while the Latin *jungo* shows another conjugation-sign.[2] The -σκω-class roots in Greek (-*sco* in Latin) show another type of *vikaraṇa*.[3] In all languages these classes have mixed up more or less according as the original distinctions based on percept differences became regrouped under different concepts. In Sanskrit most of the *vikaraṇas* fell together in the first (*bhū*) class. In the Veda we often find verbs conjugated in quite different classes to what they have acquired later, and often we have the same root conjugated in different classes with distinct shades of meaning.[4]

[1] E.g., अच्, तच्, लुप्, etc.

[2] The arrangement of roots in the mnemonic verses given in Sanskrit grammars seems to have been originally arranged in alphabetical order of these *vikaraṇas*, because they are arranged in the order of the *final* letters of the roots, as in the well known list, अक् सच् मुचि रिच् वच् विच्। सिच् प्रच्छि त्यज् निजिर् भज: ॥ etc.

[3] This is the -च्छ् in Skt. roots like गच्छ्, etc.

[4] In Greek "the various forms of present stem originally expressed different types of action. (1) verbs in ι ο (-ω) expressed *continuous* action, e.g., cf. φορῶ (wear) with φέρω (carry), ποτῶμαι (hover) with

## § 165. *The Augment.*

The augment is the only *prefix* for form-building in the I.-E. languages. The original use of this sign was to indicate past time. And in the *Ṛg Veda*, as well as in Homer, augmentless forms are pretty frequent. In fact, the use of the augment definitely denotes past time, and without the augment the sense is that conveyed by the "tense-system"[1] employed without any reference to time—past, present or future. In Greek, too, we often find in Homer the dropping of the augment making the passage vivid in "historical present".[2] When the verb is accented in Sanskrit and if it is an augment form, the accent is always on the augment. This rule seems clearly to support the view that the augment was a purely temporal prefix. In the aorist-system in the Vedic language the augment is often dropped giving the so-called "improper subjunctive".[3]

πέτομαι (fly); (2) reduplication expressed *repeated* action, δί'δωμι (offer), or *intensive* action, cf. παμφαί'νω (shine brightly) and φα'ινω (shine); (3) the suffix -σκω was *terminative*, denoting the beginning or end of an action and in many verbs became inceptive, e.g. γηράσκω (become old), ἠβάσκω (to come to man's estate), γενειάσκω (to get a beard, to come of age)". (John Thompson, *Greek Grammar*, § 230, note 3.)

[1] In the I.-E. languages four clear tense-systems are found. Grammarians have called them (*i*) Present, (*ii*) Perfect, (*iii*) Aorist and (*iv*) Future; but the names are misleading because the words have now acquired clearly-marked time connotations. *The time element is entirely absent* in the older phases of the languages; it is only a particular set of personal endings and *vikaraṇas* and other modificatory signs that determined these forms. In Sanskrit these four "tense-systems" are represented respectively by (*i*) गच्छति, (*ii*) जगाम, (*iii*) अगमत् and (*iv*) गमिष्यति.

[2] Cf. Iliad, A. 1. 10.

[3] Whitney (op. cit., §§ 585-587) gives the proportions of the aug-

### § 166. *Reduplication.*

One of the methods employed in distinguishing certain "classes" and some of the "tenses" in the I.-E. languages is reduplication. The original sense attached to reduplication is repetition. In some languages the plural is indicated by reduplication as in Japanese and Malay,[1] With verbs reduplication conveys the idea of an oft-repeated or habitual action, or an action performed intensively. Sanskrit has got intensives which have a strong reduplication.[2] Very likely the reduplicated (दु) class in Sanskrit indicated a habit. In Greek and Latin verb reduplication indicated repeated or intensive action.[3] There is another use of reduplication also found in Sanskrit and in the modern vernaculars of India ; these are the so-called reduplicated compounds, e.g., केशाकेशि, हस्ताहस्ति, etc., and they show quite clearly the use of reduplication. In Latin pronouns may be reduplicated to indicate emphasis. Thus *mēmē, tētē* (rare) ; *sēsē* (very common).[4] Among the I.-E. languages reduplication as a grammatical device is also found in Old Irish and Gothic as well.

### § 167. *Word-building affixes* : (*i*) *Prefixes.*

The grammatical suffixes are added to either roots or to words. Verbal-suffixes as a rule are added to the former and substantive-suffixes to the latter. Words are built

mentless forms to the augmented in the RV. as 2,000 to 3,300. The augmentless aorist survives in Classical Sanskrit with the prohibitive particle मा.

1 See pp. 125 and 84 above.

2 These used to be called "frequentatives" in older grammars.

3 See above, footnote 4, p. 313.

4 George M. Lane, *A Latin Grammar*, § 650.

up from roots by prefixes or suffixes and of the latter there are two varieties. The prefixes have no *grammatical* significance but they modify the *sense*. In other words they give a new compound concept. They are employed both with substantives as well as verbs. They are in essence small words indicating very abstract concepts such as arise after a good deal of mental development and progress. These little words are attachable to nouns (ad-nouns, prepositions[1]) or to verbs (ad-verbs). In Sanskrit they are grouped together under the common designation of *upasarga*. It is indeed hard in the ancient languages to know whether in a sentence these are attached more to the noun or to the verb. Besides the *upasarga* there are several other prefixes which are also found in the I.-E. languages. The most important of these is the negative prefix, in Skt. अ or अन्.

### § 168. (ii) *Primary and Secondary Suffixes.*

The other group of word-building affixes are the primary and secondary suffixes from which words are derived from roots. The prefixes are more or less used to form compound-concepts, i.e., their own meaning is added on to the meaning of the word or root to which they are attached. The primary and secondary suffixes, on the other hand, are added to derive a *new* concept from a root or word. Primary suffixes are added to the root directly, while secondary suffixes are added to words which have been already derived. These are, as may be expected, different in different languages; still a considerable number form the original stock of the I.-E. parent-language, especially among the primary suffixes. These derivative

[1] When attached to nouns they usually stand before them hence the name. Sometimes they are post-positions.

suffixes build up the feminines, the two degrees of comparison for adjectives, the ordinal numerals, abstract nouns from concrete, agent nouns and a vast number of other words. In fact these constitute the most useful as well as the most instructive aids in the building up of language.

### § *169. Compound-words.*[1]

Besides these word-building devices the I.-E. languages possess a very remarkable feature, the power of building compound-words. Other families of languages do often show two words put together, but this is mere juxtaposition, the relations between the two words thus joined being the simplest, usually that of possessor and thing possessed. Thus in Hebrew there are so-called compounds like *bethel* (the house of God), *Benjamin* (the son of Jamin), etc. But in the I.-E. languages other and more complex syntax relations are indicated by compounds. These are true compounds as distinguished from the juxtaposition observed in other languages. In fact compounds in I.-E. language almost serve the purpose of parenthetical clauses.

In the older languages these consist usually of two words. The compound does not denote merely the sum of the two concepts but *one concept* which is a sort of resultant of the two taken together. That the compound denotes one concept is seen from the fact that it has only one accent. In Veda we get the *devatā-dvandva* compounds which show *two* accents, because obviously these compounds indicate two ideas. In fact the two members of a *devatā-dvandva* are quite loosely joined together and each of them is in the dual, e.g., *indrāsómā*, and in the oblique cases

[1] See my article, "A Note on Sanskrit Compounds", in the *Sir Asutosh Mookerjee Silver Jubilee Volumes*, III, 2, pp. 449 ff.

*mitrā́vā́ruṇayoḥ*[1] Except for these *devatā-dvandva* compounds all others express only *one* concept and bear one accent.

In all the earlier I.-E. languages it is rare to find a compound of more than two members. They are mostly descriptive in their signification. But as we come to more recent times it is noted that the size of compounds increases. In Greek long compounds are not usual and are used more or less as literary curiosities.[2] But in Sanskrit the compound has had a remarkable development and in later Classical Sanskrit they form the usual method of expression.

### § 170. *Compounds in Classical Sanskrit.*

Sanskrit is now a "dead language", and it died as a result of Pāṇini's Grammar.[3] What is implied by this statement is that the other spoken languages of India progressed on their usual course, and showed clear signs of a growing analytic structure, such as the greater use of prepositions or postpositions [4] and of auxiliary verbs, but Sanskrit remained as synthetic as it was in the days of Pāṇini. But Sanskrit though "dead" as far as the masses are concerned has remained a spoken language to this day. And even though its speakers form a "microscopic minority" to-day, they formed a considerable portion of the people in the days when the later Classical Sanskrit

[1] *Mitráyor váruṇāyoḥ* is also found in RV. vii. 66.1 (and also vi. 51.1). This sort of compound, where each member is separately declined, is very common in the Avesta, e.g., *Ahunəm-vairīm*, *Vanhəuś Mananghō*, *Aśahe Vahiśtahe*, etc.

[2] See above, p. 141, footnote 3.

[3] See above, § 20, pp. 23 ff.

[4] The so-called "case-endings" in the modern Indian Vernaculars are really postpositions.

Literature was produced. Sanskrit was certainly "dead" in the sense that soon after Pāṇini's date it ceased to be the language of the home—"the mother-tongue".[1] So though later writers like Bhavabhūti and Māgha, Bāṇa and Daṇḍin, wrote Sanskrit with fluency and grace, still they must have used the more analytic Prakrit very largely in their daily life. No human being could have thought in the stilted artificial manner of these great Classics.

The terribly long compounds so common in Classical Sanskrit Literature [2] form a very remarkable proof of the natural urge of all languages from synthetic to analytic structure. For these long compounds are not mere descriptive words but whole sentences. Luckily there is no rule in Pāṇini restricting the number of words a compound may contain and therefore the natural linguistic tendency towards analytic structure blossomed forth in Sanskrit in this wondrous manner. Compounds enable us to dispense with grammatical endings and these long compounds are merely the attempts of Sanskrit at analytic construction. These compounds indicate the direction in which Sanskrit

[1] The true implication of this name—*mother-tongue*—is that the child learns speaking from the mother.

[2] Mark Twain in his book, *A Tramp Abroad*, describing the long German compounds (in the chapter entitled "The Awful German Language") has very aptly called them "alphabetical processions". He says, "Some German words are so long that they have a perspective... These things are not words, they are alphabetical processions. And they are not rare; one can open a German newspaper any time and see them marching majestically across the page—and if he has any imagination he can see the banners and hear the music, too. They impart a martial thrill to the meanest subject". In one edition of this book there is a quaint picture of this "alphabetical procession" marching over a bridge and fading away in the distant horizon! The whole of that chapter is well worth reading, because the author was a thorough master of the German language.

might have developed if Pāṇini had not written his *Aṣṭādhyāyi*. Only in that case we would have written the words separately.

In Welsh such long compounds also exist, as also in German. Both these languages are still largely synthetic in structure and here, too, the long compounds are mere expressions of the tendency towards analytic structure.

# CHAPTER XI

## Linguistic Palaeontology.

### § 171. *The Method of Linguistic Palaeontology.*

*Urgeschichte* or *Linguistic Palaeontology* is the name given to that branch of Linguistics which strives to reconstruct ancient history from linguistic evidence. It would be better to call it at once "pre-history",[1] because the period to which these investigations carry us is much beyond what history has recorded. And naturally there would be a separate set of facts for each "family" of languages. Here, of course, we shall consider Indo-European Urgeschichte. The usual method followed in this reconstruction is to get hold of the oldest records in each branch of the Indo-European languages and from a careful and critical comparison of the words contained in these certain common heritage is discoverable. This would give us a fair notion of the wealth of words the original speakers of these languages possessed and thus we may get some idea of their culture and progress.

### § 172. *Precautions to be observed.*

This branch of Linguistics is more or less of recent growth, though the foundations of this fascinating subject were laid long ago by Max Müller. Still it is quite recently that scholars have been devoting themselves seriously to it. These have worked very assiduously and carefully and the most noted among them is Professor O. Schrader of the University of Breslau. The methods along which these scholars have worked are typical of the extremely careful and critical attitude of modern Linguistics.

[1] *Urgeschichte* means "pre-history".

Certain precautions [1] are carefully to be observed and these may be enumerated and considered in some detail. The precautions are:—

(i) The presence of a word in several branches of the Indo-European family is not conclusive of its right to a place in the parent vocabulary.

(ii) The absence of a word from several branches is not conclusive evidence against its being included in the parent language.

(iii) Absence of a common name for a very common object or idea would not mean non-aquaintance with that object.

(iv) That a word is not found in the known records of particular branches is no proof that they never possessed the word.

(v) Semantic change has to be carefully borne in mind always.

(vi) From the undoubted existence of a word in the parent language no hasty conclusions need be drawn regarding the culture of the original speakers.

(vii) The existence of a word in the parent vocabulary merely proves familiarity with the object, that it was sufficiently important to be worth naming. But the degree of familiarity is to be ascertained from other considerations.

§ *173.* (i) *Presence of a word in several branches.*

It is obvious that a word is regarded to belong to the original inheritance only if it is found in several branches. Here, too, there is need to observe that if a word is common between two closely related branches (like, say, Indian and Iranian) but is not found in the others, the presumption is that it is *not* an original word, i.e., a word

[1] See Moulton, *Science of Language*, pp. 30 ff.

from the parent stock. In any case it would be unwise and not sufficiently warranted to regard it as such. In order that a word may be included in the original stock of Indo-European words it has to be found in several branches widely separated. The mutual relations of the branches may be taken as shown in the accompanying figure (20).

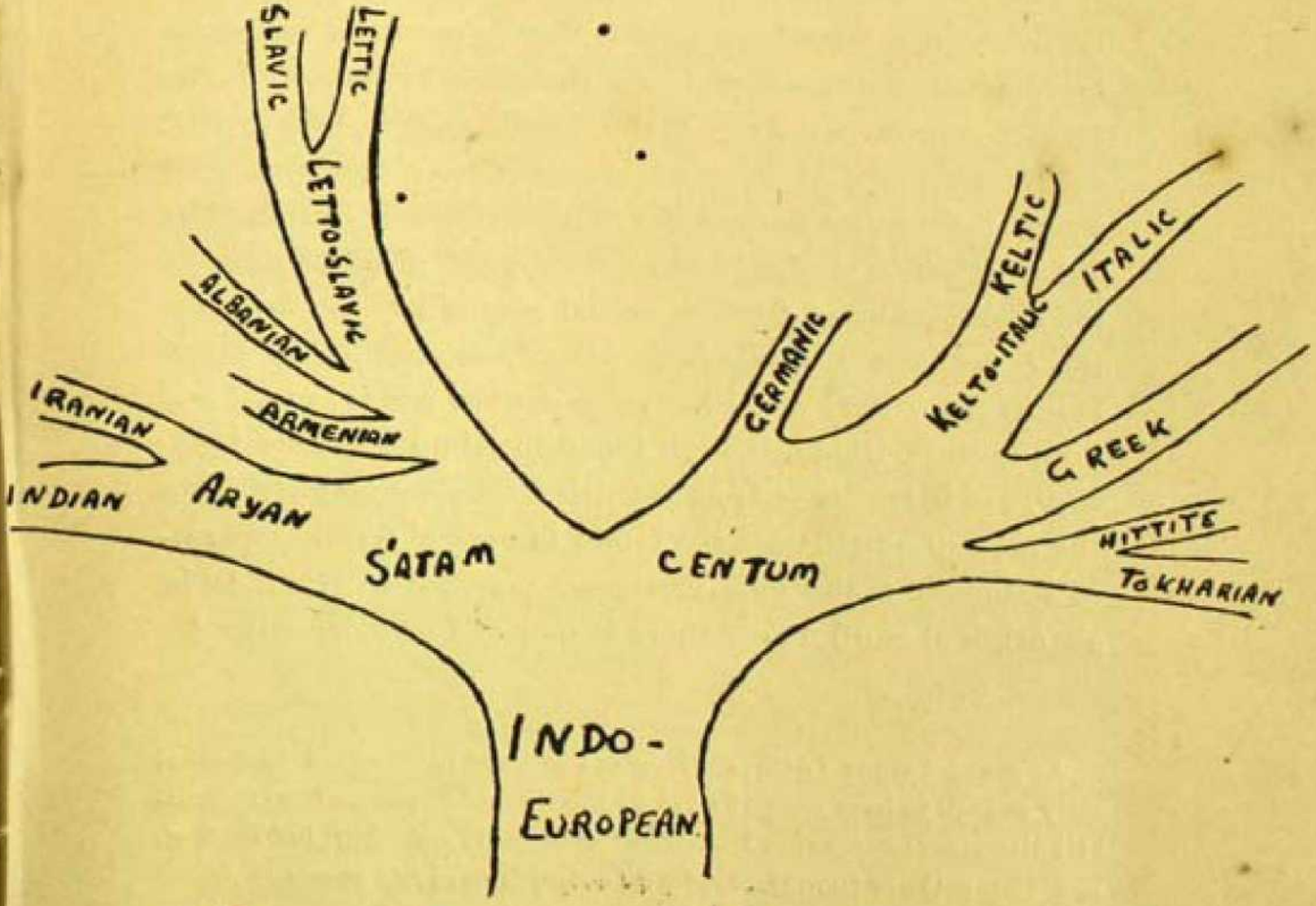



Fig. 20. Branches of Indo-European.

From this it will be quite clear that if a word is found in Greek and Sanskrit it can with greater probability be regarded as a word of the parent language than if it were found in Irish and Latin.

But even if a word is found in enough branches and in branches sufficiently separated from each other, there are still two further possibilities to be considered. The first is that the word may have been borrowed from one of the branches into the others. Such, for instance, is the word *rājā* borrowed in practically all the other branches of the Indo-European to-day. Many English words, like *sport*, *scout*, etc., are now used in other languages also. Of course these examples are of recent borrowings, but in older days Greek and Latin have given a lot of culture words to other branches.[1] The second possibility is that the word may have been a borrowing from another family of languages. Very good instances are the words *camel* and *lion*, both of which, though found in almost all the branches, are borrowings from Semitic.[2] So we may lay down the precaution that a word found in several widely separated branches of the Indo-European may not be taken to be an original word unless there is no proof of borrowing.[3]

[1] A great many Latin words were borrowed in German languages early enough to have been affected by the Second Sound-shifting. Sanskrit also shows borrowing from other languages, e.g., मेला (ink), मेला-मुक (ink-pot) are from Greek, लिपि (script) is from Old Persian.

[2] Incidentally this proves that both these animals were not known to the Indo-European people (i.e., the people speaking these languages) until they came in contact with Semitic races. It may be worth noting here that the Persian word for "lion"—*shīr* (or *shēr*) has been borrowed in Sanskrit (शेरक) and in Chinese (*shīh*).

[3] Cf. the history of the word for "rice" which is found in all European languages, but is a borrowing from Dravidian; see p. 171 above.

### §174. (ii) *Absence of a word in several branches.*

It often happens that old words in a language tend to drop out, to be replaced by borrowed words from other languages or some other synonym. And hence the absence of a word from one or more branches is not conclusive evidence against its inclusion in the parent vocabulary. Thus the Indo-European words for "son" and "daughter" have disappeared from Latin, that for "sister" from Greek and those for "father" and "mother" from Gothic. We note the same process of disappearance of ancient words in our modern languages. Thus *hound* the original word is replaced in English by *dog*. In the Indian Vernaculars a great many indigenous words have disappeared and are replaced by English or other European words. Thus the words *lamp* and *lantern* have replaced the ancient दीपक and दीवा. And the number of Persian and Arabic words in Indian Vernaculars is much greater than is usually suspected; some of the most ordinary words used daily, and which have penetrated even to the village dialects, are Semitic words which have replaced the old Aryan words. Such words are *sāheb* (master), *jawāb* (answer), *jalsā* (assembly), *arz* (request), etc. These considerations only emphasise what has been noted above already that all borrowed words have to be carefully excluded.[1]

### § 175. (iii) *Absence of a common word for a common object or idea.*

Often a very strange fact is noted with regard to Indo-European words. For no apparent reason one particular object or idea has no word in common, though we are certain

[1] § 173 above.

from other considerations that such a word did exist. The various branches show entirely different words. Thus we know that the Indo-European parent-speech had numerals up to one hundred,[1] and actually all numerals from two up to hundred are common to all branches. But there is no common word for "one". Similarly the word for "foot" is found in all branches but there is no common word for "hand"; "we can hardly infer that their physical and mental equipment was so deficient as the argument from silence would suggest in these cases".[2]

§ *176.* (*iv*) *Absence of a word in particular branches.*

As already mentioned in the beginning of this chapter we have necessarily to base all arguments upon the known records of the various languages. But obviously these would not record every word that had been used in that language. With many languages, which are important from our point of view, the recorded literature is very meagre and scanty. Gothic and Old Irish and Old Iranian are certainly of great value in considering Urgeschichte, but their records are extremely meagre. In these cases the older forms are to be inferred from those found in later records. Even in the case of languages with great literatures, like Sanskrit and Greek, it is found that new manuscripts and new inscriptions always show a considerable number of new words. The publication of the *Kauṭilīya Arthaśāstra* has brought to light a large number of new words none of which had ever been noted in our dictionaries. And these new words throw a good deal of

[1] Possibly they could count even up to a thousand, but there is no certainty about this.

[2] Moulton, op. cit., p. 33.

light on the culture and on the international relations of those days. Similarly discoveries of new Greek papyri and inscriptions have also brought out many words, whose existence was unknown till that time. Some of these had been actually postulated by scholars as probable, and their discovery in old writings incidentally proved the accuracy of phonetic laws.

### § 177. (v) *Semantic change.*

Often words change their meaning in passing from one language to another in the process of borrowing. More often an original word, inherited by various branches, changes its meaning as people change their homes in the course of their migrations. This is specially to be noted in the case of names of plants and animals. If a plant or animal existed in the original home, and was familiar enough to deserve a name, that name would probably be inherited by the various branches. When the people of these branches left their original home and wandered away they carried this word with them. But it is not always that the same plant or animal would be found in every land these people might visit. So naturally these names would be given to the plant or animal that had the closest resemblance to the original one. Thus Latin *fāgus* (beech), Eng. *beech*, Greek φηγός (oak), Kurdish *būz* (elm) are all varieties of the same original word.[1] So also Greek δρυς (oak), Irish *dair* (pine or fir), Lithuanian *derwà* (pine-wood), Latin *larix* (larch), Skt. दारु (wood or pine-tree[2]), Avesta *dāuru* (wood), Old Slavic *druvo* (wood or

[1] Schrader, *Reallexikon der indogermanischen Altertumskunde*,[1] I. pp. 170 ff. (under "Buche").

[2] As in देवदारु

tree), Gothic *triu* (tree) and English *tree* are all cognate.[1] A good example from among names of animals is the Sanskrit word उष्ट्र. The word originally meant "buffalo" or "bison," but in India it came to mean a camel on account of the similarity of colour. The camel was so unknown to European nations that in Gothic and in Old Slavic the words used for it were cognate with the name *elephant*! In Gothic the word was *ulbandus* and in Old Slavic *velĭbadŭ*.[2]

Owing to semantic change cognate words often indicate different but connected ideas. Thus Sanskrit गिरि (mountain), Lithuanian *girė* (forest) and Old Prussian *garian* (tree) are cognate and the ideas are all obviously connected. Another interesting series of cognate words consists of Latin *quercus* (oak), Old High German *forha* (pine), Sanskrit पर्कटि (*ficus religiosa*[3]); and of Lithuanian *perkúnas* (thunder) and Sanskrit पर्जन्य (Rain-god[4]). All these words are cognate and the connection of ideas is apparent when it is remembered that the oak tree is regarded as specially sacred to the God of Thunder with whom "thunder" and "rain" are obviously connected.

### § 178. (vi) *No hasty conclusions need be drawn from single words.*

Even after the existence of a word in the parent vocabulary has been established beyond any doubt, there must be a curb set upon imagination running riot. Max Müller in the early days drew an idyllic picture of an Indo-Euro-

[1] Schrader, op. cit., I, pp. 225f. (under "Eiche").

[2] Schrader, op. cit., I, p. 555 (under "Kamel").

[3] The *Pipal*-tree.

[4] Walde, *Lateinisches etymologisches Wörterbuch*[2], pp. 632 f. (under "quercus").

pean home in primitive times when the brother was the person who " carried " (भाता) the younger children of the family and the daughter was the " little milk maid " (दुहिता) of the house ! [1] This is an excellent precaution very badly needed especially in India to-day. In matters of scientific research it is safer to understate than to overstate a conclusion.

### § 179. (vii) *Various connected words may be utilised to reconstruct ancient conditions.*

The existence of a single word merely proves familiarity with an object, a familiarity sufficiently close to warrant a special name. From a single word it is not safe to draw conclusions, but several words may be put together if they indicate connected ideas, and definite conclusions may be drawn therefrom regarding conditions of life in that remote period. From the mere existence of a word for " horse " in the parent language we are not warranted in drawing any conclusion that the animal was known before the branches separated. But if, in addition, we find words for " riding ", " chariots ", " racing " etc. also common we would be thoroughly justified in concluding that the horse was tamed and utilised in various ways such as drawing chariots, racing etc. Similarly we conclude that different grains were known and that agriculture was practised and ploughs yoked to oxen were used. The use of metals and of various weapons and ornaments is also inferred in a similar manner.

[1] Max Müller's father Wilhelm Müller was a well-known German poet and so the great philologist had also inherited a poetic strain.

### § 180. *Linguistic Palaeontology demands a knowledge of many and varied subjects.*

Bearing the above precautions in mind scholars have worked on Linguistic Palaeontology. This branch of linguistics, above all, needs a good deal of help from other sciences. Anthropology and archaeology are needed first of all. A good deal of geology, especially of the quaternary period, is also needed. Connected with this a knowledge of the distribution and migrations of plants and animals is needed. Also a knowledge of local changes in the distribution of land and water in any particular region since the advent of humanity on earth is very necessary as indicating lines of migration of the various tribes. It is not possible, in these days of specialised studies, for a single person to gain expert knowledge in all these branches, but a student of Linguistic Palaeontology should possess a fair acquaintance with modern anthropological research. In short, the student of Linguistic Palaeontology has to gather a great deal of varied and expert knowledge and to re-arrange it from the linguistic point of view.

There must necessarily be a difference between the view-points of a student of anthropology and one of linguistics. The former tends to think in terms of various races and of cephalic indexes. But while admiring the scientific precision of modern ethnology, the student of linguistics knows that language constitutes a bond of union between human beings far stronger than possession of a similarly shaped head or nose. And consequently the point of view of the student of Linguistics is distinctly different.

## § 181. *The Home-land of the Indo-European.*[1]

The most fascinating problem in Linguistic Palaeontology is the determination of where the Indo-Europeans came from. The number of theories started about this question is really surprising. First of all it was Max Müller who suggested that the homeland of the Indo-Europeans was in the Pamir table-land and the adjoining regions of Central Asia. This suggestion was accepted for some years until Dr. Latham of Cambridge (a scholar of Scandinavian languages) suggested that Scandinavia was a more likely place. Later on some German scholars have contended for North Germany and Dr. P. Giles of Cambridge [2] for Hungary as the original home. Another opinion favours the region of Lithuania and the neighbouring districts of Poland. The recent discovery of the Hittite Inscriptions containing the names of Vedic divinities has led several people to suggest the upper reaches of the Euphrates and the Tigris as the homeland. Several Indian scholars, deeply versed in Sanskrit, have ventured to suggest India, and Bal Gangadhar Tilak has suggested with very cogent arguments that the North Polar region was the ancient home.[3] The latest and most

[1] It should be always remembered that throughout this book the name "Indo-Europeans" has no racial or ethnological connotation. It is used to designate merely "the people (of whatever race or country) who spoke or speak the I.-E. languages".

[2] He was my own *guru* and initiator in the science of Linguistics and it is to him in the first place that I owe my knowledge of and training in the subject. He has developed his theory of the I.-E. homeland in the *Cambridge History of India*, Vol. I, Chapter III.

[3] Tilak's arguments are very sound in the main and he develops them with great skill. Unfortunately he had very little time in his very active political life to devote to these studies. In fact the only periods during which he could utilise his profound knowledge of the

widely accepted opinion, however, is that of Professor Schrader of Breslau, who places the home in the region about the mouths of the Volga and the northern shores of the Caspian sea.

In all these opinions, except that of Tilak, there is one remarkable feature in common. And it is this, that the region in which the homeland is placed depends on the language or languages through which this question is approached.[1] Each different homeland was arrived at by reason of the languages with which the scholar was best acquainted. In any case, it must be admitted that Professor Schrader's work is full of an enormous wealth of detail and his case is extremely well presented and so his is deservedly the generally accepted opinion to-day.

### § *182. Changes of climate are ignored in Linguistic Palaeontology.*

One very important point is always lost sight of in all these discussions about the home of the Indo-Europeans. It is an accepted conclusion of geology that the distribution of sea and land *as a whole* has not varied

Vedas and kindred subjects for purposes of scholarly research, were those of enforced leisure as a political prisoner! His *Arctic Home in the Vedas* was produced during his second term of imprisonment. It was the large-hearted generosity of Max Müller (who admired his deep learning) that procured for him the necessary books in prison. It is a pity that there is a good deal of prejudice against Tilak and his writings due to his *political* opinions.

[1] When I first read Professor Schrader's work—*Sprachvergleichung und Urgeschichte*—I was considerably struck by the fact that most of his arguments were based on Slavic languages and customs. I later discovered that he was Professor of Slavic languages. Later on I had the honour of meeting Professor Schrader personally, and in the course of conversation with him my impression in this matter was confirmed by the Professor himself.

much during the period humanity has dwelt upon earth. But in any given locality considerable variation of land and water has occurred even within historical times.[1] For example the present climatic conditions of Central Asia make it impossible for any large population to live there. But a few thousand years ago the conditions were very different and it was a land supporting a very large population. The science of climatology is just in its infancy and its help should be increasingly sought by students of Linguistic Palaeontology. So also the conditions in the far north just preceding the last ice-age have not yet been sufficiently worked out in detail, for the simple reason that it is not yet possible to do so, but it is just likely that those lands had a very temperate climate then.[2]

§ *183. Other points ignored in Linguistic Palaeontology.*

The impression created from modern works on the subject of Indo-European culture is that the people were indeed in a very "primitive" stage of culture. The whole of the research at present concerns only the material side—their acquaintance with certain plants, animals and metals, their knowledge of certain arts and crafts, their recognition of certain relationships in the family and in society. It is meagre at best and leaves in our minds an impression of savages just emerging into an elementary stage of settled culture. This sort of impression is quite natural while we observe only the material side of the question. And even with regard to material culture we can get but the part which happens to be preserved in words.

[1] See for example, the very illuminating book, *The Pulse of Asia* by Ellsworth Huntingdon.

[2] See my article on "Legend of Yima and the Cradle-land of the Aryans" in the *Calcutta Review*, December, 1921.

But when we observe the structure of the original parent-language we are really struck with the cultural and mental development it implies. The wealth of verbal forms—the four "tense systems" each with five distinct conjugations (primary, secondary and three moods), the numerous derived conjugations, the subtle nuances of the *vikaraṇas*, all these show a mental development which far exceeds that of an ordinary savage. The development of the prepositions and adverbs and the great variety of these also point to a higher development.[1] Then again nouns and pronouns show practically only two numbers [2] whereas savage idioms generally show four numbers—singular, dual, trial and plural—and they have besides a considerable variety of suffixes indicating plurality. In I.-E. languages the substantive endings are almost the same for all nouns. Many of the word-building suffixes indicate a power of appreciating purely abstract concepts. The most noteworthy evidence of the mental development of the Indo-Europeans is given by the numerals. They could certainly count up to a hundred, possibly up to a thousand. Experience among savage tribes as well as with children shows that the concept of abstract numbers arises after a considerable degree of mental growth. Savages can count concrete objects, like stones, boats, spears, etc., up to several scores but of *number in the abstract* many of the tribes cannot go beyond four.

In short, the whole grammatical structure of the I.-E. parent-language, as far as can be gathered from comparative grammar, and from the large number of prepositions and adverbs as also from the numerals, shows very clearly that

[1] The Sudan-languages, as seen above, pp. 88 and 300, lack all prepositions.

[2] The dual in the older I.-E. languages is confined only to the "natural pairs".

the Indo-European mind was far in advance of the ordinary savage as is found, say, in Australia or in Central Africa. With all this evidence of language it would seem that even in material achievements and culture they were well ahead of the savages to-day. This aspect of the question has not been touched at all as yet, but it is well worth investigation, for this would appreciably alter many notions regarding the Indo-Europeans which prevail at the present time.

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# CHAPTER XII

## The Languages of India.[1]

### § 184. *The various language-families represented in India.*

India is a large land, almost a continent, and at first sight presents an amazing collection of languages and dialects. The population of this land is made up of several racial strata lying one over the other and we have a whole collection of Non-Indo-European Languages overlaid by the Indo-Aryan. The most important of the former are the Dravidian languages of South India. The other Non-I.-E. languages are mostly represented among aboriginal semi-civilized tribes. Very few of them possess written records and a great many of them do not possess even the rudiments of a literature. Among these languages, however, we find many a clue to words and phrases among the modern Aryan languages. The last named are obviously the most important among the languages of India besides the Dravidian, and many languages of both these families possess good literatures. The following are the families of languages represented in India :

1. The Austric family :

   (a) Indonesian (Malay),
   (b) Austro-Asiatic : (i) Mon-Khmēr,
   (ii) Muṇḍā (or Kōl).

[1] For this chapter I am principally indebted to Sir G. A. Grierson's *Linguistic Survey of India*, Vol. I, part 1, "Introductory". I have also derived considerable help from the "Introduction" to *The Origin and Development of the Bengali Language* by my friend and colleague Prof. S. K. Chatterji. I have not therefore given detailed references to both these works.

2. Monosyllabic (or Chinese) family :

   (a) Siamese-Chinese,
   (b) Tibeto-Burman.

3. Dravidian family.

4. Indo-Iranian (or Aryan) languages :

   (a) Iranian branch,
   (b) Dardic branch,
   (c) Indo-Aryan branch.

5. Unclassified.

### § 185. *The Austric family.*

In the survey of the Language-families of the world the Malay-Polynesian family of languages has been mentioned.[1] This family is widespread through the whole width of the Pacific Ocean. This language family is closely connected with the Mon-Khmēr languages of Indo-China and with some of the most ancient among the aboriginal languages of India. All these languages have been carefully investigated by Pater W. Schmidt, who put them together as one big family called the Austric family. Though the number of speakers of this family is not large, still the area covered is larger than that occupied by any other family of languages. East to west these extend from Madagascar to Easter Island and from north-west to south-east they extend from Northern Punjab to New Zealand. The family is subdivided as under :

[1] See Appendix A above, pp. 80 ff.

Austric Languages
Austronesian (Malay-Polynesian)
Indonesian (Malay)
Melanesian
Polynesian
Austro-Asiatic
Mon-Khmēr
Mon
Khmēr
Nicobar
Khāsī
Muṇḍa (Kōl)
Khērwārī
Santālī
Muṇḍārī
Hō
Kūrū kū
Śabara

Of the Indonesian languages belonging to India we may mention Malay and Salon. Malay is spoken at the extreme southern limit of British Burma where it approaches the Federated Malay States. The latter is the dialect of seamen of the Mergui Archipelago.

### § 186. *Mon-Khmēr and Khāsī.*

The Mon-Khmēr people were at one time the rulers and conquerors of Indo-China. They had attained to a high level of culture, but now their languages are spoken by a few wild and aboriginal tribes in Siam, Burma and India. In Burma the Mon language is spoken round the Gulf of Martaban. The Khmēr languages are also spoken in outlying portions of Burma and in Siam. The language of the Nicobar Islands is also of the same family. All these languages are outside the limits of India proper. Closely connected with them is a language spoken in India proper. That is the Khāsī spoken in the Khasi Hills in Assam. The Khāsī has had an independent development and for a considerable time has been out of direct touch with either Mon-Khmēr or other Austro-Asiatic languages. Hence it has now become very different outwardly. "Khasi forms an island...left untouched in the midst of an ocean of Tibeto-Burman languages". But its vocabulary is very close to the Mon languages of Burma and its sentence construction is essentially Mon. "The various component parts are put in the same order, and the order of thought of the speakers is thus shown to be the same".[1]

### § 187. *Muṇḍā or Kōl Languages.*

In Central India, beginning from West Bengal and stretching through Behar and Central Provinces and also south through Orissa into the Ganjam district of Madras Presidency, we find a group of closely associated

[1] Both quotations are from Grierson, *L.S.I.*, I. 1, p. 33.

dialects known by the name of Muṇḍā or Kōl.[1] This patch of Muṇḍā languages is interpenetrated by Dravidian dialects. Further West in the Central Provinces there is an island of Muṇḍā languages. Here, too, it is surrounded by patches of Dravidian dialects. But the most remarkable extension of Muṇḍā languages is found along the Himalayan range, where we find small patches of it right up to the Simla hills. There it is known as the Kanāwri dialect and there are probably other dialects further west. The two most important dialects are Santālī and Muṇḍāri. The Śabara dialect is interesting as being that of the *śabaras* (forest hunters)[2] who are also mentioned by Pliny and Ptolemy.

§ 188. *The Influence of Muṇḍā Languages on Indo-Aryan.*

Grierson, following Pater W. Schmidt,[3] thinks that the Muṇḍa grammar bears the closest resemblance to Turkish. Its wonderful capacity for agglutination, by which "an enormous number of complex ideas can be formed according to the simplest rules", can be best appreciated by the fact that the conjugation of the verb *dai* (to strike) in the 3rd person singular alone occupies nearly a hundred pages in Mr. Skrefsrud's Santālī Grammar.[4] There are

[1] Max Müller is responsible for the name Muṇḍā. The word Kōl is a native word in these languages themselves and means "man". The word *kola* in Sanskrit means "pig" and very likely the same word is applied as an opprobrious term to the aborigines, who are pre-eminently pig-breeders. Hence perhaps Grierson is right in choosing the term Muṇḍā rather than Kōl with its more offensive connotation.

[2] The Śabara dialect of Muṇḍā must not be comfounded with the *Śābarī* Prakrit.

[3] Pater Schmidt's book on the Austric Languages is named *Die Mon-Khmēr Völker, ein Bindeglied zwischen Völkern Zentralasiens und Austronesiens* (The Mon-Khmēr People, a connecting link between the peoples of Central Asia and Austronesia).

[4] Grierson, op. cit., p. 37. What follows is also from the same work.

some very well marked characteristics of Muṇḍā speech which have influenced other languages of India. The extremely complex conjugation of the Behārī verb is certainly due to Muṇḍā influence. So also the use of compound participial adjectives instead of relative clauses which is a common feature of Indo-Aryan Languages, is shared by the Muṇḍā languages as well. Another well marked peculiarity in Muṇḍā is the double plural of the pronoun of the first person—an " inclusive " (which includes the hearer) and one " exclusive " (which excludes the hearer). This is certainly taken over in many Aryan languages of India. Thus in Gujarātī અમે ગયા હતા means " we (not including you) had gone ", but આપણે ગયા હતા means "we (and you) had gone". Another very important influence of Muṇḍā is found in the vigisimal system of numeration.[1] In fact the word for " a score " used in all Indo-Aryan languages—कुड़ी (*kuṛī*)—is a Muṇḍā word.

§ *189. The Monosyllabic, Chinese or Tibeto-Chinese, Family.*

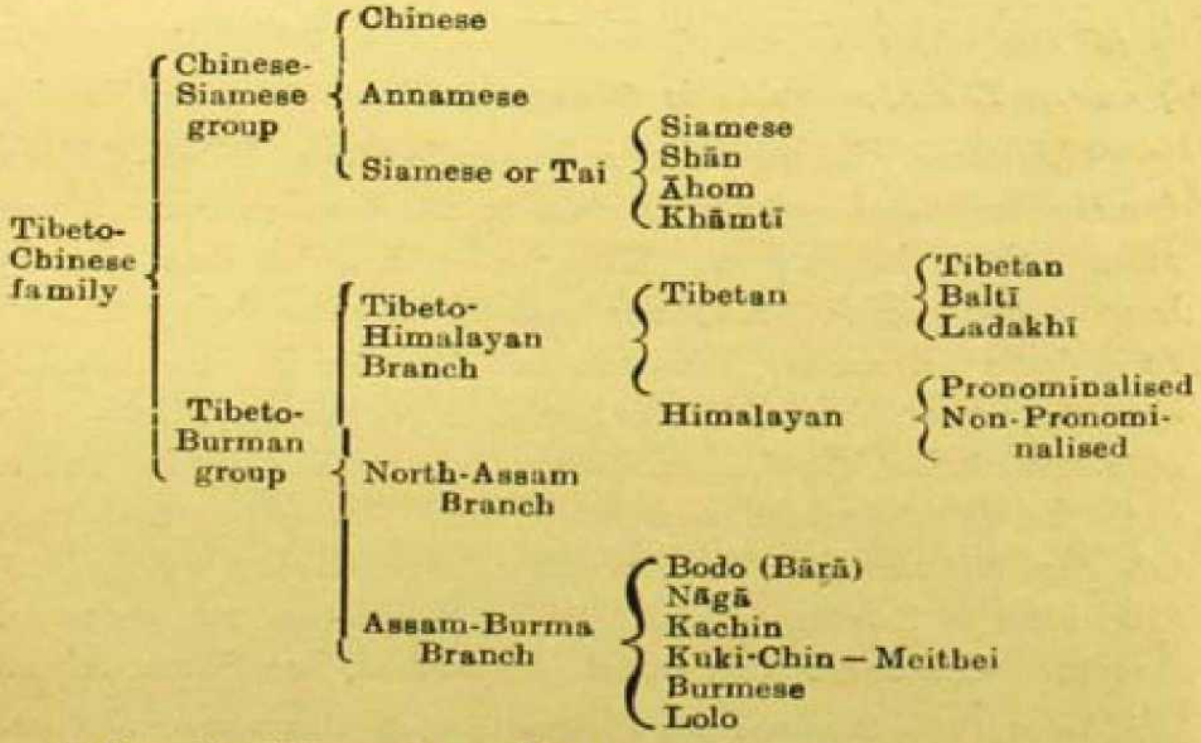
This family is sometimes also called the *Tibeto-Chinese* family because these two represent the two extreme types among these languages. Their classification has already been considered.[2] Another manner of classifying these is to include Annamese, Siamese and Chinese in one branch, the *Siamese-Chinese*, the other branch being *Tibeto-Burman*. Chinese itself is nowhere a vernacular in India, even though there are many thousand Chinese settled here. Of the Siamese or Tai branch a large number of dialects are found in Burma as well as in north-eastern parts of Assam. Of these the most important are Shān, Āhom

[1] Among the Romance Languages French shows traces of the vigisimal system in words like *quatrevingts*, etc., which was probably due to Celtic influence. In Welsh *ugain* is 20, *deugain* is 40, *triugain* is 60 and *pedwarugain* is 80.

[2] Appendix A, pp. 102 ff., above.

and Khāmtī. Shān is spoken widely over Upper Burma. Ahom is an offshoot of the Shān, and the Āhoms in 1228 A.D. entered the valley of the Brahmaputra where it emerges from the mountain barrier. To this land they gave their name, which was ultimately changed to the modern *Assam*.[1] These people left comparatively few traces of their domination on the Aryan Assamese. But they cultivated specially chronicles and historical diaries [2] and this has deeply influenced Assamese literature. And the Assamese word for "history" or "chronicle" (*burānji*) is an Āhom word. The Khāmtī were another set of the Shāns who settled in Eastern Assam and ultimately ousted the Ahoms. The Khāmtī languages are the only ones of the Tai branch found in India to-day.

The following table indicates the classification of the Tibeto-Chinese languages :[3]




[1] *Āhom* itself is originally *Ā-shām* or *Ā-shān*.

[2] It was a sign of noble birth and good breeding with these people to record in detail contemporary events.

[3] See diagram given by Grierson at p. 54 of the *L.S.I.*, I. 1.

## § 190. *Tibeto-Burman Languages.*

The subdivisions are as indicated in the preceding table. Tibetan proper (or *Bhōtiā* as it is often named in India) is a language with a very considerable literature. A great deal of this consists of translations from Sanskrit works on philosophy, Buddhism and kindred subjects and many of these are of great value for the cultural history of India, because the Sanskrit originals have been lost. The other languages of this group except Burmese are without any literature. The various branches are connected in a rather complex manner, which may throw a good deal of light on the migrations of the tribes speaking these languages.[1] It seems that the original home of these languages was in north-west China near the head-waters of the Yang-tsze-kiang and the Hwang-ho. From there they went down the courses of these two great rivers into China proper and down the Brahmaputra, the Chindwin, the Irawady, the Salwin, the Menan and the Mekhong into India, Burma, Siam and Annam. In all these lands they found older inhabitants, most probably the Mon-Khmēr people. The original Tibeto-Burman stock seems to have reached the point where the Brahmaputra emerges from the mountains and then split into three divisions. One followed the Brahmaputra upwards into Tibet, another followed the course of the same river downwards into Assam and the third branch followed the courses of the Chindwin and Irawady into Burma. The North Assam group is an amorphous collection of dialects which represent intermediate stages between the Tibetan and the Burmese. "Their territory is a kind of backwater over which various

[1] See diagram given by Grierson at p. 54 of *L.S.I.*, I, 1.

waves of Tibeto-Burman immigration have swept, each leaving its record in the speech of the inhabitants".[1]

### § 191. *The Tibeto-Himalayan branch.*

In many respects the most interesting languages of this group from the linguistic point of view are the Himalayan dialects. These separated out from the main Tibetan stock sometime before the latter reached its present stage of development, and they have had a history of their own. They were split up into a large number of dialects and, mixing with the older languages of these Himalayan valleys, they got changed to such a great extent from the main stock, that in some respects they developed traits the very opposite of the parent Tibeto-Chinese language. The chief of these newly developed traits are :

(i) A sharp distinction is made between animate and inanimate objects.[2]

(ii) Higher numbers are often counted by twenties and not by tens as in Chinese, Siamese, Tibetan, etc.

(iii) Personal pronouns have dual and plural.

(iv) The first personal pronouns have "inclusive" as well as "exclusive" duals and plurals.

(v) In the verbal conjugation the person of the subject as well as the object is denoted by suffixes being added.

Every one of these characteristic features of the Himalayan branch of these languages is "in entire disagreement with Tibeto-Burman, or even Tibeto-Chinese principles".[3]

[1] Grierson, op. cit., p. 60.

[2] The Law of Polarity discussed above, pp. 94 ff.

[3] Sten Konow in *L.S.I.*, iii, 1, p. 179 (quoted by Grierson, op. cit., p. 56).

All these are the distinguishing characteristics of the Muṇḍā languages. These latter, as already noted, once spread all along the Himalayan valleys and there are even to-day, "islands" of Muṇḍā speech as far west in the Himalayas as Simla and probably even further. Near the western borders of Nepal and near the Sikkim-Nepal border, too, several Muṇḍā languages are found. "It therefore seems probable that Muṇḍās, or tribes speaking a language connected with those now in use among the Muṇḍās, have once lived in the Himalayas and have left their stamp on the dialects there spoken at the present day".[1]

These Himalayan Languages were first studied carefully by Hodgson who classified them into "non-pronominalized" and "pronominalized", which classification runs through them all. It is based on the last characteristic mentioned above, viz., suffixing the personal pronoun to the verb to denote not only the subject but also the direct and indirect objects.[2] The former (i.e., "non-pronominalized") are spoken in the eastern regions of Nepal and in Sikkim and Bhutan. The other group is found more among the central Himalayas. Of these non-pronominalized languages the most notable are the Róng (or Lepcha) and Sunwār. Róng is the language of Sikkim and it is the "Bhotiā language" heard in Darjeeling. Sunwār is to-day classed as non-pronominalized,[3] though Hodgson writing in 1847 put it down very clearly as pronominalized. From this it seems that the older languages of the Muṇḍā group are receding before the advancing tide of the Tibetan. In the eastern Himalayas, where there are easier passes to

[1] Sten Konow, loc. cit.

[2] E.g., the form *hiptung* in Limbu (a Himalayan dialect) is made up of *hip* (to strike), *-tū* (him) and *-ng* (I), which means "I strike him" (*L. S. I.*, I. 1, p. 57).

[3] By Sten Konow in *L.S.I.*

Tibet, the influx of Tibetan is easier and hence it is quite natural to find the languages there non-pronominalized. In the central parts the Himalayan languages are slowly changing from the pronominalized variety to the other type. In the western Himalayas in the Ladakhī and Baltī dialects we have pure Tibetan.

### § *192. The Assam-Burma branch.*

The various languages of this branch are indicated in the table above. Of these the Bodo and Nāgā languages are closely connected with the Himalayan branch. The Kuki-Chin and Burmese are more or less independent types while the rest are intermediate in character.

The area of the Bodo languages is almost completely aryanised and consequently these languages are fast disappearing. The Nāgā languages are numerous and they have a surprising variety of dialects. The country is very mountainous and the people very fierce, and these two reasons have caused the great diversity of speech in this region. "Where communication is so difficult, intercourse with neighbouring tribes is rare, and, in former times, when heads were collected as eagerly as philatelists collect stamps and no girl would marry a young fellow who could not display an adequate store of specimens, if a meeting with a stranger did take place, the conversation was sure to be more or less one-sided. Under such circumstances, monosyllabic languages, such as those of the Nāgās, with no literature, with a floating pronunciation, with a system of taboo which is ever and anon prohibiting the further use of certain words, and with a number of loosely used prefixes and suffixes to supply the ordinary needs of grammar, are bound to change very rapidly and quite independently of each other".[1] The Kuki-Chin

[1] Grierson, op. cit., p. 59.

group is remarkable in possessing a language in the Meithei, which has got literary remains in the shape of chronicles of Manipur state going back to 1432 A.D. This ancient language has helped a good deal in clearing the history of modern Meithei, and incidentally it proves how rapidly and how completely monosyllabic languages can change. One remarkable characteristic of the Kuki-Chin group is the entire want of finite verbal forms. Verbal nouns, participles and other sorts of periphrases are used.

Burma languages are really numerous dialects, but there is a standard literary dialect—Burmese. There are great variations in pronunciation between this literary dialect and the vernacular of the home.

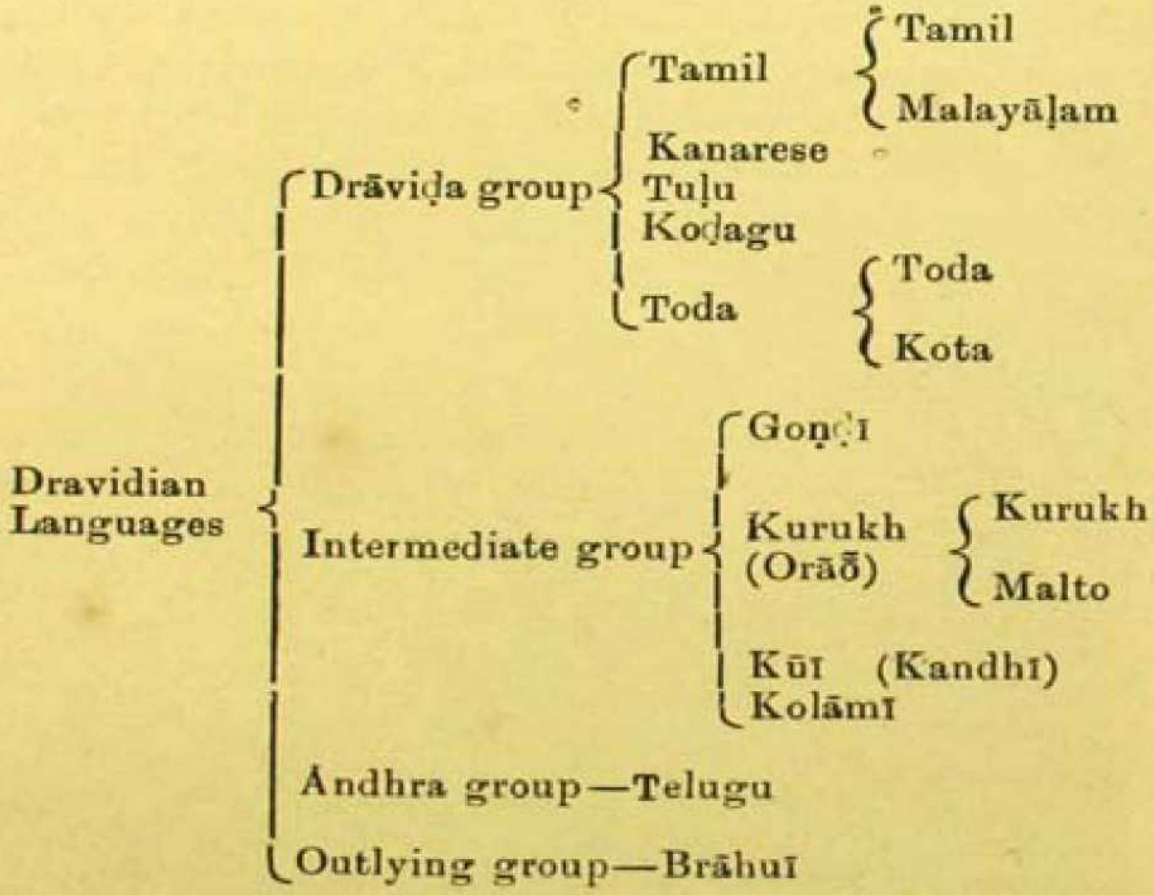
### § 193. *The Dravidian Family.*

This family of speech is the most important in India after the Aryan languages. It differs in almost all important respects from the Muṇḍā and in the very important particular that at least four of these languages are highly cultured and possess fine literatures. They form a very compact group of agglutinating languages and some of the affinities they show to other agglutinating languages are really surprising. These have not yet been thoroughly worked out, but it would be really worth while studying these aspects of their history. Prof. O. Schrader of Kiel has tried to show their affinity to the Finno-Ugric family.[1] Lately, the discoveries at Mohenjo-daro of a culture allied to the Shumerian has opened up the possibility of linking up the Dravidian languages and culture with Shumer and still further west with Crete.[2] Finally

[1] Prof. Schrader had lived many years in Madras as Director of the Adyar Library of the Theosophical Society at Madras. His article is entitled "Dravidisch und Uralisch" and it appeared in the *Zeitschrift für Ind. u. Iran., III.*

[2] See the article by Prof. Suniti Kumar Chatterji in *The Indian*

Pater W. Schmidt[1] has proved that undoubted connections exist between the languages of Australia and Dravidian. This idea contains "suggestions of a possible connection by land between India and Australia in the times when the prehistoric Lemurian continent is believed to have existed".[2] Kumārīla Bhaṭṭa is said to have divided the Dravidian languages into two clear groups—the *Āndhra* and the *Drāviḍa* which is substantially correct although it leaves out minor languages. The chief Dravidian languages and their grouping is shown in the table[3] below :




*Historical Quarterly* (Mar., 1925) entitled "Recent Discoveries in Sindh and the Panjab".

[1] In his book, *Die Gliederung der Australischen Sprachen.*

[2] Grierson, op. cit., p. 82. This same Lemurian continent would solve the question of connecting the languages of Madagascar with those of Indonesia.

[3] Adapted from Grierson.

## § 194. *Characteristics of Dravidian Languages.*

The Dravidian languages are agglutinating and polysyllabic, but their forms are by no means as complex and as extensively agglutinated as are the Muṇḍā forms. The agglutination is quite clear, the stem and the suffixes can be sharply distinguished, the stem itself remains unchanged. Other grammatical peculiarities are[1] :

(1) The genders are essentially divided into "animate" and "inanimate". The pronouns of the third person alone show masculine and feminine and these are suffixed to adjectives as well. With nouns, where necessary, the word signifying "male" and "female" are added.

(2) The "inanimate", i.e., neuter nouns are rarely used in the plural.

(3) Postpositions are used instead of prepositions.

(4) The adjective is not declined so as to agree with the substantive as is done in I.-E. languages. Often participial suffixes of verbs are added to form adjectives.

(5) There are two plurals of the pronoun of the first person— an "inclusive" and an "exclusive".

(6) There is no passive voice of verbs, the passive is expressed by means of an auxiliary. The middle voice (*ātmanepada*), too, is known by a few traces only.

(7) There is a "negative voice", which has, however, but one indeterminate (aorist) tense.

(8) Continuative participles are preferred to finite verbs.

[1] For a list of the differences between Dravidian and Sanskrit (I.-E. languages) see Caldwell, *Comparative Grammar of Dravidian Languages*[3], pp. 48 ff.

(9) Relative participial nouns are used in place of clauses introduced by relative pronouns.[1]

### § 195. *The Drāviḍa Group.*

Among the languages of this group, and indeed among all the Dravidian languages, Tamil is the most cultivated and possesses the largest literature. It has works going back to the 8th century A. D. Modern Tamil literature is also very flourishing and Bengali and Marathi seem to be its only close rivals to-day in matter of literary production. Ancient Tamil had an alphabet of its own, the Votteluttu. The modern dialects are fairly uniform, but there are two forms of the standard dialect. One is the "perfect" (*shen*) form used in poetry and is somewhat stilted and artificial; the other is the so-called "vulgar" (*kodun*) form which is colloquial.

Malayāḷam is called "the eldest daughter of Tamil". It separated from the latter as an offshoot in the 9th century. It is spoken on the south-western coast of India and in the Laccadive Islands. It came under Brāhmaṇa influence and has been sanskritised. The Moslem speakers of Malayāḷam,—the Moplas—not having come under this Sanskritic influence speak a purer, though archaic, form of the language. Malayāḷam has got a fairly large

[1] "In the Dravidian languages, though nouns and pronouns are united by means of conjunctions, finite verbs are never so united. In every sentence there is but one finite verb, which is the last word in the sentence, and that the seat of government; and all the verbs which express subordinate actions or circumstances, whether antecedent or contemporaneous, assume an indeterminate, continuative character, as verbal participles or gerundials, without the need of conjunctions or copulatives of any kind, so that the sense (and more or less the time also) waits in suspense for the authoritative decision of the final governing verb. Hence these participles might probably be called continuative gerundials". (Caldwell, op. cit., p. 488.)

literature, which is being fostered under the enlightened princes of Travancore and Cochin.

Kanarese is the language of Mysore. It also possesses a good literature and the ancient poetical language is quite stilted and artificial. It is written in a script connected with that of Telugu, but the language is clearly very close to Tamil. Kanarese has got several minor dialects which seem originally to have been tribal or caste dialects.

Of the other dialects of this group Tuḷu is confined to a very small area to which it has been confined from very ancient times. It is well cultivated and Caldwell regards it as among "the most highly developed languages of the Dravidian family", despite the fact that it has no literature. He adds : "it looks as if it had been cultivated for its own sake, and it is well worthy of careful study".[1] Koḍagu is between Kanarese and Tuḷu both geographically and literally. Toda and Kota are the dialects used by the wild aboriginal tribes of the Nilgiri Hills. They are spoken, according to the census of 1921, by 1,855 people in all. The reason for the survival of these languages is that the tribes live among the hills and hardly ever mix with others. The Todas are a dying race.

### § 196. *The Intermediate group of Dravidian.*

These are quite a number of languages, mostly spoken by the wilder forest tribes and they are spread over a belt in Central India stretching from the Berars to Behar and Orissa and one little island of the Malto dialect in Rajmahal on the Ganges. The most important of these is the Goṇḍī. Many of the Goṇḍ tribes have now taken to speaking one of the Aryan dialects of their neighbours. There are a number Goṇḍī dialects but there is very little difference between them beyond local variations in pronunciation.

[1] Op. cit., p. 31.

Kurukh or Orāõ is a language which according to tradition comes from the Karnatik. It has close affinities to the Drāviḍa group and has a number of dialects, the most interesting of which is the Malto spoken in the Rajmahal hills. It is considerably influenced both by the Aryan and the Santālī which are its neighbours. The Kurukh dialects occupy almost the same area in Behar and Orissa as the Muṇḍā languages do and there is a considerable exchange between them. In some places, tribes speaking the one type have abandoned it and taken up the other. Thus near Ranchi the Dravidian Kurukh has been abandoned in favour of a Muṇḍārī dialect.

Kondhī or Kuī [1] is most nearly related to Telugu, and possesses a much simpler verbal conjugation than the other dialects of this group. The tribes that speak it are among the wildest of the tribes in Orissa and at one time human sacrifices were quite common among them.

Kolāmī is found in the western districts of the Berars. Here the influences of the Bhīlī dialects of Central India are to be marked. Indeed, the Kolāmī dialects like the Toda are fast dying out and are being replaced by the Aryan Bhīlī. Linguistically it is very close to Telugu.

### § 197. *Āndhra or Telugu.*

This is practically a uniform language having local, tribal or caste dialects. It has the largest number of speakers among the Dravidian languages.[2] In respect of culture and literature it is second only to Tamil and in its modern phase it bids fair to rival the latter. Its literature dates from the 12th century and it has borrowed

[1] *Kuī* is the name used by the native speakers of the language. The Gonds call themselves *Kōi*.

[2] According to the *L.S.I.* quite 19,750,000.

freely from Sanskrit. It is a language possessing great euphony, every word in it ends in a vowel and it has a very pleasing sound as compared to Tamil which is harsher. Its dialects are found scattered over much of Central Provinces and in Bombay. They have been carried there by wandering tribes of herdsmen, watchmen, shopkeepers, bricklayers, etc.

### § 198. *Brāhūi.*

This is a remarkable linguistic island at the extreme end of British India—in the midst of Baluchistan and surrounded by Iranian-speaking tribes. The Brāhūī speakers mix so freely with their neighbours and even intermarry with them so frequently that they are almost all bilingual. The real wonder is how the language has managed to survive so long in that corner. Its survival surrounded by entirely different type of languages is as wonderful as that of Basque.

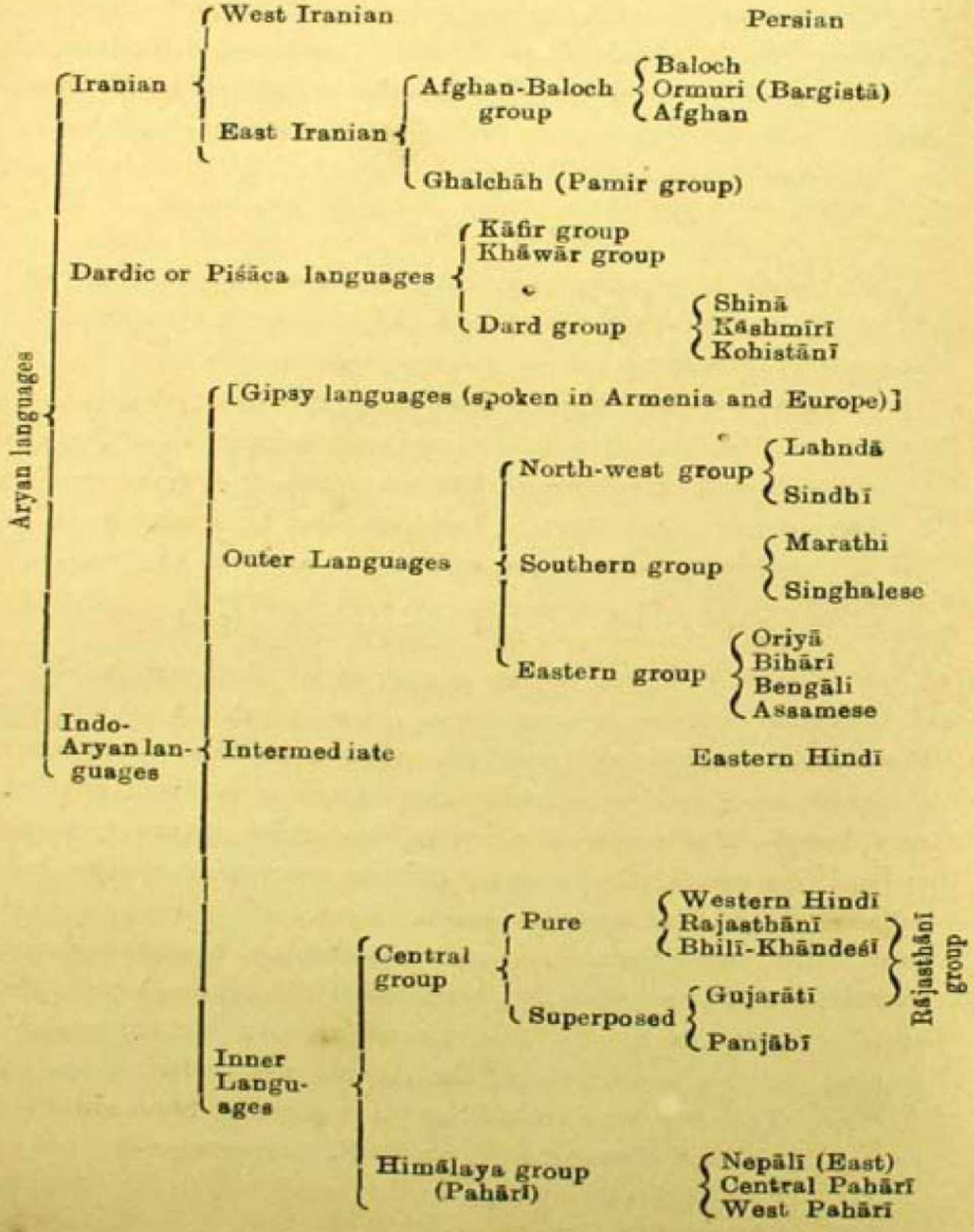
### § 199. *The Aryan Languages of India.*

Without entering on the question of the original home of the Indo-European languages[1] we may take it for granted that the Aryans lived together for a considerable time before splitting up. And when they did separate the immigrations to different regions took place in successive waves. And it is more than probable that these successive waves both towards Iran and towards India did not all follow the same route. It seems that the Dardic languages, that occur midway between these two, split off *after* the Indo-Aryan had separated and in the Proto-Iranian period. Representatives of all the three branches of the Aryan are to be found in India. Their mutual relations have already been shown in the last table of Appendix B on I.-E. Languages.[2]

[1] See § 181 (pp 331 f.) above.

[2] See tables on pp. 163 and 166, above, and also further on p. 204.

*Table of Modern Aryan Languages of India.*



The preceding table shows the modern Aryan languages spoken in India and in the neighbouring lands on the borders. It would be out of place here to enter into a discussion regarding the triple division of the Indo-Aryan languages of India. The grouping into Inner and Outer Languages, with an Intermediate link, was first suggested by Hoernle and has been accepted by Grierson, though the latter is entirely of a different opinion regarding the cause of this peculiar arrangement.[1] Grierson explains the position by the fact that the Aryans did not come to India in one single "invasion" or wave of immigration, but clan after clan speaking closely related and mutually understandable dialects arrived during a long period of years. The Aryans[2] who first came were naturally the first to pass on into the *Madhyadeśa* (the Midlands, between the two great rivers Gangā and Jamunā). This was the region known as the *Āryāvarta* (the Aryan-pale) and this was the land where Hindu-Aryan culture was finally fixed and its law codified. The Aryan clans that arrived later on had naturally to meet with opposition from the first settlers and many of them went round this Midland settlement and in course of time these first Aryans in India found themselves surrounded on all sides by the late comers. As can be well imagined it was not a comfortable position for the midland people to be thus surrounded. They made efforts to expand, else they would have become extinct. They did so in all directions. In the north they reached the Himalayas, where they settled

[1] See Grierson, op. cit., pp. 115 ff. See also his papers on "Indo-Aryan Vernaculars" in the *Bulletin of the School of Oriental Studies* (London).

[2] I wish to point out clearly that I do *not* mean to impart any ethnic significance to this word.

down in the valleys of Nepal and in the Western Himalayas right up to Kashmir. In the south they reached the sea through Gujarat. In the west they reached almost to the Indus and in the east almost up to Benares. In the north they did not find any other Aryan language, but in the other three directions there were Aryan languages. So there grew up three "intermediate" forms of Aryan languages. Of these three Eastern Hindī in the east is a real bridge between the true Inner languages and the Outer ring. In the west we have Panjābī which is an Inner language superposed upon an older Aryan language of the Outer group. Similarly in the south Gujarātī is a superposed Inner language.[1]

### § 200. *Iranian Languages on the Western borders of India.*

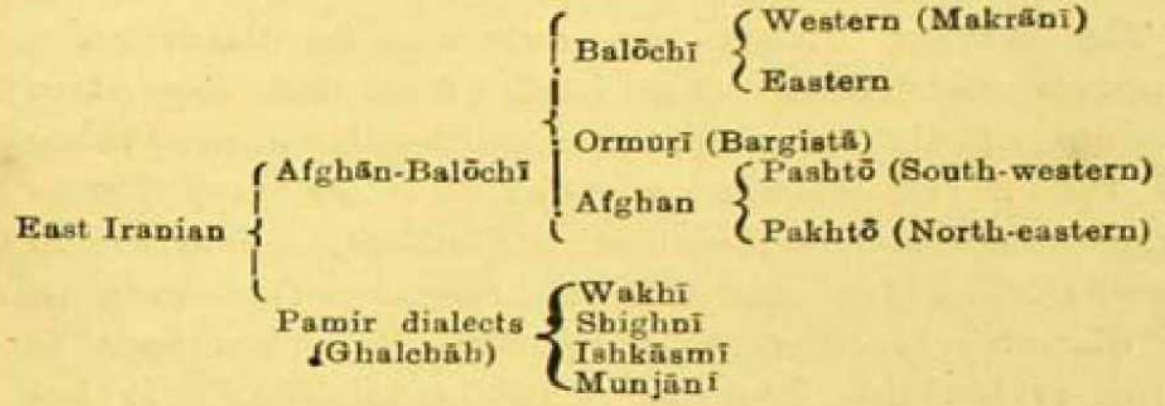
Of the Iranian languages none is indigenous to modern India except in Baluchistan and the western borders of the Panjab and in the North-West Frontier Provinces. In many respects the most important Iranian language from the point of view of Indian Linguistics is Persian,[2] which belongs to the West Iranian group. But Persian is nowhere a vernacular in India to-day.[3] The other Iranian languages used on the

1 Gujarat was a colony from Mathura in the Madhyadeśa.

2 See the next section, § 201.

3 There is however a small Persian colony of about 7,500 people in Baluchistan who speak a Persian dialect called Dewārī. Of the Iranians settled in India the Zoroastrian Parsis have made Gujarātī their mother-tongue. Moslem Iranians settling in India usually make Urdu their mother-tongue in the second or third generation. This state of affairs may be compared to the adoption of English by all immigrants in the United States of America.

border are of the East Iranian group. Their relationships are indicated in the table below :




Balōchī is spoken in Western Sindh as well as in Baluchistan proper. It is the least advanced to the analytic stage among the Iranian languages and preserves a great many archaic forms. In the eastern dialect there is a considerable borrowing from Indian languages, especially from Sindhī and Lahndā. Balōchī has borrowed from Persian and Arabic like other East Iranian languages. But certain Arabic sounds cannot be pronounced in Balōchī, hence a good many words from that language undergo strange transformations. Balōchī possesses a small literature consisting of folk-songs and folk-tales.

Ormuṛī or Bargistā is a language spoken in the heart of Afghanistan by a few thousand speakers. A few Ormuṛī speakers are also found in the N.-W. Frontier Province. It is an interesting language possessing some points of resemblance with Persian, some with other West Iranian dialects (like Kurdish)[1]

[1] Grierson in his monograph on "The Ormuṛī or Bargistā Language" (*Mem. A.S.B.*, VII. 1, p. 52) maintains that "on the whole it agrees generally, and closely, with the western Iranian dialects, including Kurdish". As confirmatory evidence he cites the Ormuṛī word

and some with Pashtō. It is considered here in the Afghān-Balōchī group more for geographical than for linguistic reasons.[1]

The Afghan dialects are numerous in the different mountain districts of that land. But there are two divisions of the language: the South-eastern or Pashtō and the North-western or Pakhtō. The very names suggest that the differences are mainly phonetic in character. In fact the Afghan language (including all the dialects) is often called Pashtō. The language is strong and vivid but very harsh-sounding.[2] It has borrowed a considerable vocabulary from the adjacent Indian dialects. Since the beginning of Hindu history parts of Afghan Territory have been recognised as kindred to India. During the Buddhist and later Hindu periods Afghanistan formed part of the Empire of Northern India. And even in the days of the Moghals Afghanistan was part of their empire. With all this intimate contact with India it need not surprise us to know that even the grammar of the language shows Indian influence.

*spuk* (dog), which agrees very closely with the Medic word σπα'κα mentioned by Herodotus.

[1] This same reason probably has caused Grierson (*L.S.I.*, I. 1, pp. 102 ff.) to divide Iranian languages into the Persic (Western) and Medic (Eastern). As far as the language of Media is concerned, "no remains of a Medic language have been discovered" (Sykes, *His. of Persia*[2], I, p. 121). See also *Grundriss d. iran. Philologie*, II, for all the knowledge we possess indirectly of Medic. It seems that the word "Medic" used by Grierson in the *L.S.I.* is not a very happy choice. Elsewhere he speaks of "Non-Persian" languages of Iran.

[2] Grierson (op. cit., p. 106) quotes a well-known proverb; "Arabic is science, Turki is accomplishment, Persian is sugar, Hindostānī is salt, but Pashtō is the braying of an ass!" Does the name *kharoṣṭhi* imply this?

The Ghalchāh (Pamir) dialects are non-literary dialects of a very inaccessible region.[1] These dialects are the link connecting Iranian and Dardic languages.

### § 201. *The influence of Persian on Indian languages.*

Indian languages of the Outer group, which are on the western and north-western border are full of words of Iranian origin—especially of Persian, for Persian was the language of Iranian culture. Long before the Islamic conquest Persian words were introduced into the Prakrits and Sanskrit.[2] The province of Gujarat had active and constant commercial intercourse with the Persian Gulf and as a result of that intercourse a number of Persian (Middle-Persian) words came into the language of Gujarat centuries before the Islamic conquest.

After the Islamic conquest the influence of the most important language of the Islamic world (Persian) spread wherever Islam spread its empire. Every language of India has been more or less deeply influenced by Persian vocabulary and by wholesale borrowing of Persian words. Most students of Indian languages have a tendency to belittle this influence. Of course, these languages had no direct touch with the speakers of Persian, hence the grammar was not affected.

[1] Grierson mentions (op. cit., p. 21) how a specimen of one of the Pamir dialects was delayed for months, because officers of the Linguistic Survey knew only one person who knew both the dialect in question and Chitrālī, which they understood, and this person could not be approached because snow blocked the passes across the Hindukush!

[2] E.g. शेरक (*shēr*, lion) and हरक (*hurā*, wine), which are both found in the *Arthaśāstra*.

Besides these Islamic and pre-Islamic borrowings from Persian mention might be made of Iranian colonies on Indian soil. The Parsis in the 8th century merely followed the example of numerous predecessors. In Kashmir, in the Panjab and even in parts of Gujarat and Behar traces of Iranian colonisation are to be found. These Zoroastrian Iranians, worshipping the Sun and the Fire, became absorbed in the indigenous population and were named the *Śākadvīpīya Brāhmaṇas*.[1] Undoubtedly these colonists introduced a great many Persian words in the languages of the people.

The most remarkable influence of Persian is to be seen in the growth of Urdu as a distinct artificial language of later days. This might be considered at its proper place.

### § 202. *Dardic or Piśāca languages.*

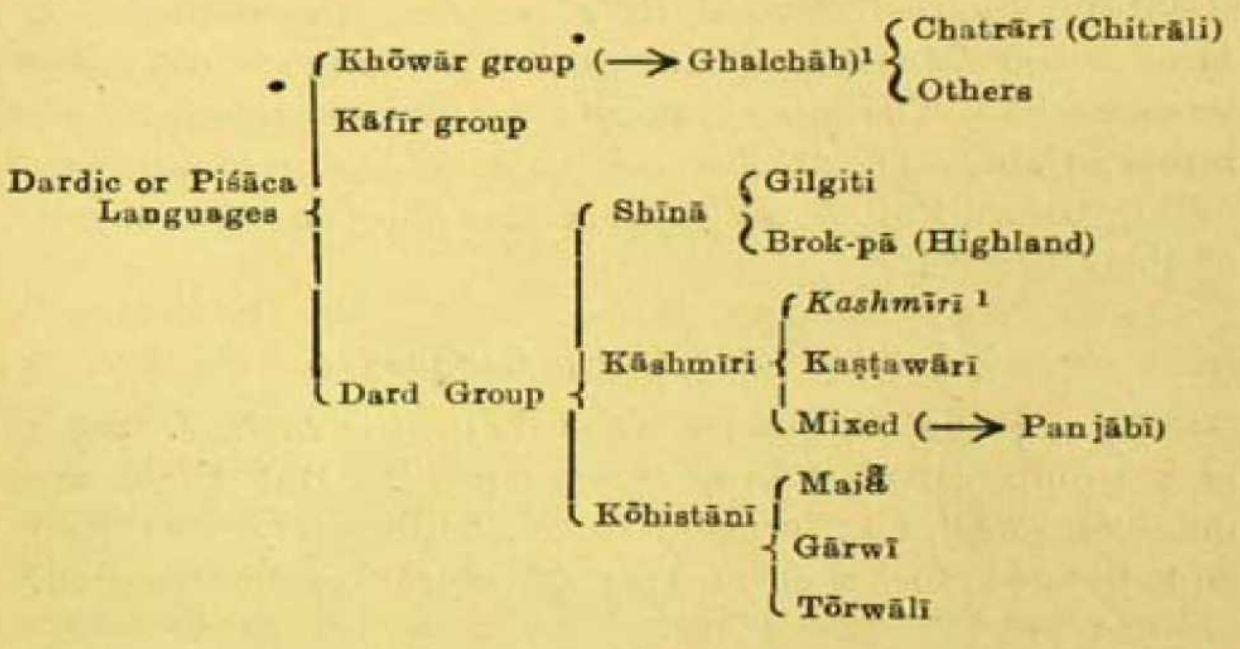
The people of the region known as Dardistan—a mountainous region between the north-west of the Panjab and the Pamirs—were Aryans who had left their Aryan[2] home and sometime before the Iranian dialects had crystallised. They show clear Aryan affinities but their position is midway between Indian and Iranian. They have preserved a great deal of the original Aryan structure. The name of the Dards is found in Sanskrit literature in the Epics and in the Purāṇas.[3] They were also known to the Greek writers of history and geography. The Sanskrit writers looked upon them as degraded Aryans, and often called them *Piśācas* or "demons" and their languages and the languages influenced by them they

[1] See the *Bhaviṣyat Purāṇa* for a detailed description of these very interesting people.

[2] Note the *Aryan*, not the I.-E., homeland.

[3] दारद or दरद.

called *Paiśācī*. At one period, the Dardic languages spread over a very much wider extent, but before the oncoming "outer Aryans" as well as owing to the subsequent expansion of the "Inner Aryans", the Dards fell back to the inaccessible mountain regions from whence they had first expanded. But their languages have left ample traces on the later Indo-Aryan languages that replaced them. In Lahndā, Sindhī and Panjābī, in Nepālī and even in the far south Kōṅkaṇī dialect of Marāṭhī the influence of Dardic may be traced. The chief Dardic languages are :




The Khōwār group serves to connect Dardic with Iranian, just as the Kāshmīrī dialects link up with Panjābī Indo-Aryan. The Kāfir languages are spoken in an extremely

[1] In this and the other tables that follow an arrow with the name of another language indicates that the dialect shades off into the language either by imperceptible degrees or through a succession of "mixed dialects". The names in *italics* indicate the "standard" dialect.

inaccessible region to the west of Chitral.[1] And a few of these are also spoken in the Afghan territory conterminous with Kāfiristan.

The Dard group is closely connected with the Kāfir group. Shinā is the language of the Gilgit valley and of the Indus valley from Baltistan to the river Tangir. This is the original Dard country, hence Shīnā represents the present form of Dardic. Kāshmīrī is the only Dardic language possessing a literature. Among the most remarkable works in this language are the Śaiva poems of Lal Ded a poetess of considerable gifts.[2] There are slight differences of vocabulary between the dialects of Hindu and Musalman Kāshmīrīs, as might naturally be expected. The mixed dialects to the south shade off into Panjābī. The Kohīstāni dialects are gradually receding before Pashtō, only a very few cling to the speech of their ancestors.

### § 203. *The Gipsy Languages.*

Among the languages treated in the *L. S. I.* there is a group called "Gipsy Languages". But these are mere "argots", i.e., forms of speech deliberately corrupted and twisted for the purpose of secret communication.

[1] Grierson mentions (*L. S. I.*, I. 1, p. 110) that for a specimen of the Wasī-veri or Veron dialect the officers concerned could get hold of none but a wild and half-stupid shepherd from some valley. The poor fellow could talk only his own language and was, moreover, badly frightened when caught for the purposes of the Linguistic Survey. An old man, a Bashgali, was, however, discovered who somehow contrived to interpret. Of course such results cannot be regarded as scientifically accurate, but we must also remember that this is the first time many of these languages are put before critical students of linguistics. The humour of the whole situation is indeed rich!

[2] These have been published by Grierson and Barnett.

Some of these are dialects of wandering tribes, which have got quite mixed and corrupted owing to their having come in contact with many different forms of speech in the course of their wanderings. And owing to the fact that there is no literature these changes have been rapid and bewildering. These languages will be considered later on in the section of "Argots".

But the true Gipsy Languages are spoken outside India and are therefore not considered in the Linguistic Survey. These are divided into two broad groups, the European and the Armenian. These wandering tribes, it seems, set out from India about the 5th century A. D. and passing through Dardistan into Persia they went on to Armenia. Another branch went on further into Europe, into Hungary, Russia, Poland and Germany. Some even penetrated into France and England. Most of their dialects show clear Dardic influences, thereby proving that they stayed a considerable while in Dardistan. Perhaps, already in the land of their origin, there was the Dardic influence present, even before these tribes set forth on wanderings. The land of their origin seems to have been the Panjab. In each of the lands where they "settled",[1] their dialects borrowed largely from the native languages and hence the Gipsy Languages show a bewildering variety of vocabulary and outward form. But careful examination of their structure points unmistakably to the North Indian Prakrits as the point of origin of all these languages. The time of the Gipsy emigration is not quite fixed, but it is certainly not very far from that indicated above, viz., the 5th century A. D. That was the period of great folk-migrations all over the eastern world.

[1] They are perpetually wandering about and on principle they object to dwelling in houses. So by the word "settled" we must understand merely that they remained in that country.

Incidentally these languages supply good material for determining the phonetics of the Indian languages of that date.[1]

The very queer mixture of the original Indo-Aryan language with the modern European languages may be appreciated from the following specimens of "English Gipsy", where the pure English words and suffixes are in italics :

*The* tatcho drom *to be a* jinni-mengro *is to* shūn, dik *and* rig *in* zi (The true way to be a wise man is to hear, see and bear in mind).

Dui Romany Chals *were* biteheni.

Pawdle *the* bori pāni.

Plato *for* kōr*ing*.

Lāsho *for* chōr*ing*.

*The* putsi *of a* bori rānī.

(Two Gipsy lads were sent away.

Across the great waters.

Plato for rioting.

Lasho for stealing.

The purse of a great lady).[2]

§ *204. Stages in the growth of Indo-Aryan Languages.*

Before taking account of the modern Indo-Aryan languages it would be well to glance rapidly at their

[1] Persian as pronounced in India to-day preserves the ancient pronunciation of that language, closely allied to the Pahlavi with the vowels fairly open. So also the pronunciation of Chinese in Japan is of the days when Chinese culture was first introduced into that land.

[2] *tatcho* (सच्चा) ; *drom* (Mod. Grk. δρο'μος) ; *jinney* (from ज्ञा to know), *mengro* (a masculine suffix meaning a person ; so *jinni-mengro* means a "knowing person") ; *shūn* (सुनना) ; *dik* (देखना) ; *rig* (रखना) ; *zi* (Skt. धी).

historical development from the earliest ages. Fortunately we possess full materials for the linguistic history of India from the earliest times in an unbroken series of records. Not only that but Indian scholars themselves have from earliest times been investigating linguistic phenomena with wonderful accuracy and insight and we owe a great many details of the languages of the ancient days to these indigenous grammarians. We can make out quite clearly three periods which shade off insensibly from the one into the other. In each period there was a literary standard dialect which constitutes our main source of information for the dialects of that period ; but the native grammarians for each period have given us quite a lot of information regarding the phonetics and other details of the various *spoken* dialects also. These three periods are called Old Indo-Aryan, Middle Indo-Aryan, and New (or Modern) Indo-Aryan.[1] Other names for these are Primary Prakrit, Secondary Prakrit and Tertiary Prakrit respectively and these are really better. For they include the word *Prākṛta* (प्राकृत) which means "common" i.e., spoken language [2] as opposed to *Saṁskṛta* (संस्कृत) the "polished" dialect of literature. Students of the linguistic history of India are particularly prone to think of Sanskrit as the only language to be considered, whereas, as a matter of fact, it was but *one* of many dialects, even though its importance as an instrument of culture far exceeds that

*chal* ( छेल, छइल )); *bitcheni* (sent away); *pawdle* (across); *kōr* (to riot); *putsi* (purse, Skt. पुटम्) ; *rānī* (means generally a lady and *rāi* is a gentleman).

[1] I prefer not to give any dates but merely to indicate the order of succession.

[2] Or rather *vulgar* in the same sense as in the name "Vulgar Latin".

of all the rest put together. The languages of these three periods and their connections are diagrammatically shown in the accompanying table.[1]

### § 205. *The Primary Prakrits.*

The oldest languages of which we have records in India are the Old Indo-Aryan languages (rather dialects) or the Primary Prakrits. There are two groups to be distinguished —(i) the colloquial dialects and (ii) the literary dialects. The former have been noticed in the earliest works on Indian grammar and phonetics—the *Prātiśākhyas* and others. They are grouped phonetically and geographically into five groups—the Northern, Western, Southern and Eastern with the Midland dialect in the centre. This was the original Inner dialect—probably of the first immigrants into India. The outer surrounding dialects were those of the later Aryans who went round the middle colony. Each of these developed into the various Secondary Prakrits.

The literary remains of this period are the Vedic hymns. The hymns were actually composed at a period considerably more remote than when they were actually edited and the whole collection was arranged. Many of the hymns were actually composed outside India proper. The composition of the Vedic hymns extends over quite a few centuries and the geographical area over which they have been composed is also of considerable extent. Traces of differences of dialects both in point of time as

[1] It will be seen that it is a modification of the previous table on p. 166. I have adapted this from that given in Prof. Suniti Kumar Chatterji's *Origin and Development of the Bengali Language*, Vol. I, facing p. 6. Dardic is included in this table because the *Piśāca*-Prakrits are included among Secondary Prakrits by Indian Grammarians.

well as of the provinces are to be found clearly in some of the hymns. The Yajur Veda shows clearly the distinction of time—some of the hymns are among the most ancient in India. The Atharva Veda is on the whole the latest production of the Vedic age. In the Rig Veda we have the so-called "family books" (*Maṇḍalas* ii-viii), which show clear dialect distinctions. There are certain words and phrases common in one book, which are not found in other books and so also are certain grammatical forms peculiar to certain books. Later on, in the Primary Prakrit period, we find the Vedas "edited" and fixed in their present shape. This period also produced the later Vedic Literature—the *Brāhmaṇas* and the *Upaniṣads*. The language of all these literary works is known by the generic term "Vedic Sanskrit".

## § 206. *Classical Sanskrit.*

The literary languages of the Primary Prakrit period are the earlier varieties of Sanskrit. That particular dialect was quite close to the spoken dialects and so it also continued to develop with the other dialects. Since the editing and collecting of the hymns, however, this particular dialect got the double conserving force of religion and literature. But that was a period of movement and activity and the later literary language of the Brāhmaṇas is appreciably different. It is clearly more progressed on the way to analysis. Even at that period the Vedic hymns seem to have been regarded as ancient and as needing special commentaries and explanations in order to understand them well.[1] Towards the end of the Vedic

[1] So in the *Brāhmaṇas* we find the first linguistic (etymological) speculations of India.

period [1] occurred an event of far-reaching importance in the linguistic history of India. That was the great grammar of Pāṇini, which effectually stopped all growth of this literary language.[2] From that time Sanskrit ceases to be a natural, spontaneous language and in the course of ages it gets more and more artificial. But in spite of this it has wielded enormous influence upon all subsequent linguistic development of India. It has always been the literary language *par excellence* of India.

### § 207. *The Secondary Prakrits.*

The second stage was when the languages usually known by the name of "the Prakrits" were the chief spoken Aryan languages of the country. And in course of time literature began to be produced in these languages too. The rise of Buddhism and the fact that the Buddha preached his Gospel in the language of the people was a direct cause of the production of literature in these languages. The first of these to have a literature was Pali. The learned people and the Brāhmaṇa writers continued to produce works of literary merit in Sanskrit, but in the drama especially Prakrit was freely used. Only men of the higher orders spoke Sanskrit in these, all women [3] and the lower classes spoke Prakrit. This was probably a true picture of the linguistic state of India at that time.

[1] Or perhaps early in the period of Secondary Prakrits. Pāṇini is certainly earlier than any literary work (poetry or drama) of classical Sanskrit. The Epics might have been earlier in their original redaction. Many of their verses show archaic formations which have entirely disappeared from later Sanskrit.

[2] See above §§ 19 and 20.

[3] Rarely, learned women, like Buddhist nuns, would be represented as talking Sanskrit.

The higher classes would be speaking Sanskrit to show off their learning and also to maintain their prestige.[1]

The period of Secondary Prakrits may again be subdivided into three stages: (i) the Early Prakrit stage, (ii) the Middle Prakrit stage and (iii) the Late Prakrit (or Apabhraṁśa) stage. The first two are represented in Prakrit literature, but the last stage is purely colloquial and our knowledge of the Prakrits in the Apabhraṁśa (or colloquial) is gleaned from grammarians like Hemacandra, who have described this stage in some detail. Of course the languages were used for colloquial purposes all through, but in the earlier days the colloquial and literary were quite close together. It was only in the final stage that the literary language became fixed and stereotyped, and consequently drifted further and further apart from the spoken language of home. Hence in the last stage of the Prakrits grammarians had to point out particularly the essential unity of the spoken language with the literary.[2]

The Early Prakrit stage has for its literature: (i) the oldest inscriptions (including all the Aśoka inscriptions); (ii) the Pali of the Buddhist Canon and of the *Mahāvaṁso*

[1] Much as the Pandit class to-day interlard their vernacular writing with Sanskrit words and phrases.

[2] "The different Prakrits were mutually understandable among the educated. A speaker of Sanskrit, whose *mother-tongue* was the spoken form of any one of the Prakrits, would readily understand any of the literary Prakrits....In the older stage the difference was still less marked. Still further back we should find only the difference between 'correct' and 'incorrect' pronunciation,...—the difference between the speech of educated and uneducated people speaking substantially the same language" (Woolner, *An Introduction to Prakrit*, pp. 8-9). Later on, Woolner draws an interesting parallel between this state of affairs and what occurred in Europe during the birth stages of the Romance languages.

and the *Jātakas*; (iii) the Prakrit of the earliest Jaina writings; and (iv) the Prakrits of the earliest Sanskrit plays like those of Aśvaghoṣa recently discovered in Central Asia.

The Middle Prakrit stage includes: (i) Mahārāṣṭrī in which a fine poetical literature is found; (ii) the Prakrit of the classical Sanskrit Drama;[1] (iii) the Prakrits of the later Jaina books; and (iv) the Paiśācī which is known only from the grammarians.[2]

The Apabhraṁśa (or colloquial) Prakrits represent the last stage of second epoch in the linguistic history of India. The Apabhraṁśa dialects represent a very colloquial form of the various Prakrits from which the modern Indo-Aryan Vernaculars of India, the Tertiary Prakrits, have been directly derived. They represent the last days of the Prakrits and the beginnings of the Vernaculars. There is no literature recorded in these for in their very nature they are corrupt (*apabhraṣṭa*) and "vulgar" and consequently they are not fit for literary usage.[3]

### § 208. *The Literary Prakrits.*

From the table given above it will be seen that the Literary Prakrits also group themselves into Outer and Inner. The latter known as *Śaurasenī* is directly connected with the Primary Midland Prakrit and in its turn gave birth to the Midland Language—Western-Hindi of to-day. Of the Outer Prakrits the important ones are *Mahārāṣṭrī*

[1] These are described in detail by the Prakrit grammarians.

[2] Woolner, op. cit., p. 2.

[3] This statement needs some modification. The vulgar dialects were sometimes used for composition and in that connection these have received the attention of the grammarians. As a matter of fact the records of any Apabhraṁśa would be indistinguishable from the oldest relics of the corresponding Tertiary Prakrit.

(southern) and *Māgadhī* (eastern). Other Outer Prakrits are those of the north and west represented in the Inscriptions. Then there is *Ardha-Māgadhī*, a variant (as the name implies) of the *Māgadhī*.[1] Out of it is born the Mediate language, Eastern Hindī.

*Mahārāṣṭrī* is *the* Prakrit of the grammarians.[2] They first give its rules and then compare the other dialects with it and enumerate the variations. It has a magnificent literature of lyric poetry. In Sanskrit dramas the lyric pieces to be recited in Prakrit are given in Mahārāṣṭrī. The great power of this dialect in songs and lyrics is clearly seen in Rājaśekhara's *Karpūramañjarī*. The language originated in the Deccan and its main feature is the abundance of vowels[3] in it making it fitted for song and music.

*Śaurasenī* is the usual Prākrit of the prose portions in Sanskrit and Prakrit dramas. It is nearest to classical Sanskrit. It originated in the original Madhyadeśa, the home of Sanskrit. "Owing to this close kinship with the sacred tongue, Śaurasenī was overshadowed; continually influenced by Sanskrit, it failed to make much independent progress".[4]

*Māgadhī* is the dialect of the eastern borders of Aryan culture and hence in the drama it is spoken by lower

[1] Grierson thinks that Ardha-Māgadhī is a transition form between Śaurasenī and Māgadhī. Geographically this is perfectly accurate. Woolner, however, mentions that in this classification the position of Ardha-Māgadhī is " a weak point " (op. cit., p. 64). He mentions that between Māgadhī and Śaurasenī in the early stages the differences consist of merely "striking phonetic variations", whereas the Ardha-Māgadhī of the early Jaina scriptures is something very different.

[2] महाराष्ट्राश्रयां भाषां प्रकृष्टं प्राकृतं विदुः ॥ Daṇḍin.

[3] Single intervocalic consonants are usually dropped, e. g., उदक becomes उअअ, प्राकृत becomes पाउअ, सुभग becomes सुहअ, and so on.

[4] Woolner, op. cit., p. 5.

classes. Several dialects are distinguished. This Prakrit has very strongly marked phonetic peculiarities. In many ways it is the most interesting of Prakrits.[1]

*Ardha-Māgadhī* is, as the name itself implies, a transition variety between Śaurasenī and Māgadhī. But it is more archaic than Śaurasenī. The Jaina scriptures are in this dialect, but Jainas also used Śaurasenī and Mahārāṣṭrī for their works.

*Paiśācī* has been mentioned by the Prakrit Grammarians and mention is made of the *Bṛhatkathā* composed in it. But the work is not extant. One important characteristic of this dialect is the substitution of voiceless for voiced mutes, e.g., तामोतर for दामोदर and so also राचा, नकर, etc. There is a good deal of cerebralising, too, in the variety of Paiśācī discussed by Hemachandra.[2] It seems that this constituted a group of Aryan dialects taken up and corrupted by Non-Aryan speakers on the borders of the Aryan-speaking region, or else Paiśacī dialects may have been very corrupt forms of Aryan dialects. In any case, there is reason to suppose that Paiśācī dialects were not necessarily confined to Dardistan, though they may have originated there.[3]

The *Inscription Prakrits* show several dialectical peculiarities, especially those of the north-western languages.[4] They have been classified into various groups. Among these we may also include the Prakrit of Khotan. They

[1] The reason of the striking phonetic variations in Māgadhī seem to be due to close contact with Non-Aryan languages. See Woolner (op. cit., pp. 57ff.) for an enumeration of the peculiarities of Māgadhī.

[2] Called by him चूळीका पैशाची. See Woolner, op. cit., pp. 68 f.

[3] See Woolner, loc. cit.

[4] One of these peculiarities is the preservation of the conjunct consonant when the second one is *r*, e.g., *priya* for the usual Pk. *piya*.

all, in fact, belong to the Northern and Western groups of the Primary Prakrits. Mention may here be made of the *Gāthā* dialect of Buddhist literature. It is a queer mixture of classical Sanskrit and Prakrit.

*Pālī* is the most important of the " Literary Prakrits ". The name " Pālī " originally means "boundary" or "limit", and then it was applied to the Canon of Buddhism. Thence it was applied to the language itself in which the works were written. In phonetics and grammar Pālī retains more of the structure of the original Indo-Aryan than any of the other Prakrits, which shows that Pālī is among the oldest of the Prakrit languages.

The exact position of Pālī among the languages of the secondary period is a matter of dispute. The Buddhist tradition has it that the Buddha preached in Māgadhī and so some scholars seem to think that Pālī was a sort of cross between Old Śaurasenī and Old Māgadhī. On the other hand the Indo-Aryan language of Ceylon is a direct descendant of Pālī, which was carried to Ceylon by Mahinda, the son of Aśoka, from Ujjain. In that case Pālī, would be a Mahārāṣṭrī dialect strongly influenced by Āvantī, a Western dialect. This seems to be supported by the fact that Eḷu (the ancient form of Singhalese) and modern Singhalese show very close resemblances to Mahārāṣṭrī and Marāṭhī.

### § 209. *Characteristics of Prakrit Languages.*[1]

In spite of dialectic differences the whole group of Prakrits shows certain distinguishing peculiarities as contrasted with Sanskrit. The Prakrits (including Pālī) are still synthetic in structure though much less so than Sanskrit. The Indo-Aryan cases are tending to disappear

1 I have been obliged to Woolner's book, so often quoted, for this section.

as also the wealth of verbal forms. And as we come to the Apabhraṁśa stage the noun has only two or three case-endings and the verb is "little more than one tense and two participles". Out of this broken down synthetic structure the analytic modern languages of India grew up. In Phonetics conjunct consonants were assimilated, the *vṛddhi*-diphthongs disappear, and so also the sonants. The *y* also tends to disappear being replaced by the *j*. Of the three sibilants only one survives, usually the dental (स्) ; but in the Māgadhī the palatal ( श् ) survives. The *visarga* too disappears. The Prakrits have developed the more open vowels *ĕ* and *ŏ* while retaining the older *ē* (ए) and *ō* (ओ). Final consonants tend to disappear ; and not more than two consonants can follow a short vowel and not more than one a long vowel. In Mahāraṣṭrī intervocalic consonants tend to disappear and so we get a string of vowels occasionally helped by a consonant. So it becomes hard to recognise वप्पइ राआ as वाक्पति राजा and ओरईअच as अवतीर्ण.

The dual has disappeared and the only case forms remaining are the nominative, accusative and genitive. All declensions are levelled to the *a*-declension. Similarly in verbs the Imperfect, Perfect and Aorist have gone as also the Ātmanepada. In Pālī, however, the Ātmanepada and Aorists are found quite often and even the Perfect is sometimes found. But the use of prepositions and auxiliaries to take the place of the forms that have disappeared does not begin till the Apabhraṁśa stage, for the more important work in literature at that period was done in Sanskrit, owing to the Hindu revival and the re-establishment of Brāhmaṇa domination.

### § 210. *The Origin of the Tertiary Prakrits.*

The beginning of the Modern Indo-Aryan Vernaculars of India dates from about the 1000 A.D. when Islam

began to count as an important factor in Indian history and Indian life. So Persian (and through it Arabic) has been an important factor in the development of these Tertiary Prakrits.[1] As already seen above these are derived from the Apabhraṁśa forms of the Prakrits. Some of these latter are named and described by the Prakrit grammarians, though there are no literary dialects corresponding. Among all these Apabhraṁśas the influence of the Śaurasenī (Midland) form is predominant.

The *Vrācḍā* Apabhraṁśa which gave rise to Sindhi is mentioned by grammarians, but no mention is made of the Apabhraṁśas from which Lahndā and Panjābī have arisen. In the latter, however, there are certainly traces of Śaurasenī influence. The Pahāṛi languages can be traced to the *Khaśa* Apabhraṁśa, which belongs to the Himalayan branch of North Indo-Aryan.

The Western Indo-Aryan was most probably of the Outer group and from it can be derived several inscriptional Prakrits as well as the Āvantī dialect. One of these Prākrits is the *Saurāṣṭrī* in which numerous inscriptions have been discovered. Over this group of dialects there came a very strong influence of the midland Śaurasenī and the resulting Apabhraṁśa was very largely altered. It became, in fact, so impregnated with the peculiarities of the inner group that this *Nāgara* Apabhraṁśa and the Gujarātī-Rājasthānī languages derived from it are now to be classed as of the Inner group.[2]

[1] This fact is recognised by the University of Calcutta, by recognising Pali, Prakrit and Persian as the "Basic languages" of the vernaculars for the examinations.

[2] The Śaurasenī influence on the ancestor of Panjābī also tended to change an outer dialect into an essentially inner one.

From *Pali* is derived through *Eḷu*[1] the modern language—Singhalese—of Ceylon. *Mahārāṣṭrī* is the only Southern Prakrit, and is the sweetest of them all and gives *Marāṭhī*. Both these—Singhalese and Marāṭhī—show considerable resemblances to each other.

*Śaurasenī*, the midland dialect, is the most important and the only one of the inner group among Prakrits. From it comes Western Hindī, one dialect of which, Hindostānī, has been the *lingua franca* of India for several centuries. Western Hindī has influenced Rājasthānī very profoundly.

*Māgadhī* and *Ardha-Māgadhī* are both branches of the same Eastern Indo-Aryan. The latter possesses some literature going back to the Old Prakrit stage, which is, in consequence, more archaic in form than Śaurasenī. From Ardha-Māgadhi has come Eastern-Hindī which has been also strongly influenced by Western-Hindī. Māgadhī has had four languages derived from it: Oriya, Behārī, Bengali and Assamese. The last two form a fairly close group.

§ *211. Influence of Sanskrit on the Tertiary Prakrits.*

Although Sanskrit had ceased to develop at a very early period, still the literature it embodied, and even more the religion and culture it enshrined, gave it at all times a unique position among the languages of India. Wherever any abstract or higher idea had to be expressed, it had to be done by means of Sanskrit words with well-known and long-established usage. Hence the debt of all Indian languages, which are at all cultured—even the Non-Aryan Dravidian languages—to Sanskrit is

[1] The word *Eḷu* is *Heḷu* from *Hiaḷu*<*Sīhaḷu* (=*Siṁhala*), i.e., Ceylon.

incalculable. All the Aryan languages have their basis in one of the sister dialects of (Vedic) Sanskrit and so the whole vocabulary must be Sanskritic; but even after the Primary Prakrit period was over and after the Prakrits became definitely different from the learned and literary Sanskrit, the borrowing of Sanskrit words went on. A knowledge of Sanskrit was essential for any pretension to learning and culture, and often Sanskrit words were used where pure dialect words were available. Accordingly the words in modern Indo-Aryan languages are classified as *tatsama*, *tadbhava*, and *deśya*. *Tatsama* are words which are direct borrowings from Sanskrit,—words which are "like that (i.e., Sanskrit)". *Tadbhava* are words which have come down, from the Prakrits,—words which are "derived from that (i.e., Sanskrit).[1] *Deśya* words are such as cannot be traced to any original Sanskrit word. Sometimes these words may be connected with words in other Indo-European languages and thus traced back to the original Indo-European parent language. To these three classes modern scholars add a class of *ardha-tatsama* (semi-*tatsama*) words. These are the Sanskrit words borrowed by the Prakrits in the Secondary Prakrit period and having been naturalised, these have come down into the Vernaculars. These have gone through all the phonetic changes needed in passing from secondary to tertiary Prakrits and are often, therefore, taken for *deśya* words. Thus the word राजा is a *tatsama* and the word राय is *tadbhava*; रजनी is *tatsama*, but रैण is a *semi-tatsama*.

But the influence of Sanskrit is not merely confined to the borrowing of words whether as *tatsama* or

[1] Here "Sanskrit" is to be understood in the sense of the original "Sanskritic" languages, i.e., the Indo-Aryan.

*tadbhava*. Sanskrit has permeated through and through the style of all Indian literature. In every Aryan language of India to-day there are writers who merely write Sanskrit with a few vernacular particles and verbs to join the whole together. This is particularly noticeable in Bengali,[1] in the so-called " High-Hindī " and in Gujarātī to-day. A famous writer of Hindī has said, " when a Hindī writer takes his pen in his hand, he ceases to be sober, and becomes Sanskrit-drunk ".[2] In Gujarātī the main contention which engages Parsi and Hindu writers of the language is this same संस्कृतमय जडबांतोड (sanskritised jaw-breaking) Gujarātī.[3]

[1] Grierson (*L.S.I.*, I. 1, p. 152, ftn.) has tried to parody in English a passage of sanskritised Bengali. He has used Latin equivalents for Sanskrit words. The result is rich and delicious! I have myself read through and understood a book written in Bengali after knowing the alphabet only. The amount of Sanskrit in it was quite enough. There is a healthier reaction now owing to the influence of Rabindranath Tagore.

[2] Quoted by Grierson, op. cit., p. 130.

[3] As an example I would like to quote from a recent Gujarātī version of the *Bhagavad-Gītā*. I choose at random verse II. 13, and give below the original and the " translation " :

Original : देहिनोऽस्मिन्यथा देहे कौमारं यौवनं जरा।
तथा देहान्तरप्राप्तिर्धीरस्तत्र न मुह्यति ॥

Translation : देहीने जेम आ देहे बाल्य यौवन ने जरा।
तेवी देहान्तरप्राप्ति तेमां मोहे न धीर को ॥

I would much rather read the original!

As another delicious sample I would like to quote a version in "Gargantuan Gujarātī" of the simple " Please, give me a pinch of snuff ". It runs thus :

घ्राणेंद्रियसंबधी शरीरना मज्जातन्तुमां आश्चर्यकारक व्याकुळता उत्पन्न करनारा खांडेला चूर्णनो डब्बीमां कृपया मारो हस्ताङ्गलीओ बोडवा देशो !

Even greater is the force of Sanskrit *Grammar* in retarding the progress of the vernaculars towards analytic structure. The grammar of vernaculars as taught even to-day is merely Sanskrit grammar with vernacular words. All the cases and verbal forms of Classical Sanskrit, which, as a matter of fact, do not exist, are taught to the bewildered youth of our schools. The result is that there is an utterly unscientific and distorted idea of the mother-tongue produced in the mind of the learner. The essential difference, that Sanskrit is synthetic, while the modern language is largely analytic, is never brought out. After learning this sort of grammar in their childhood, it is not at all strange that our writers prefer the Sanskrit style.[1]

## § 212. *The Outer Languages: North-Western group, (i) Lahndā, (ii) Sindhī.*

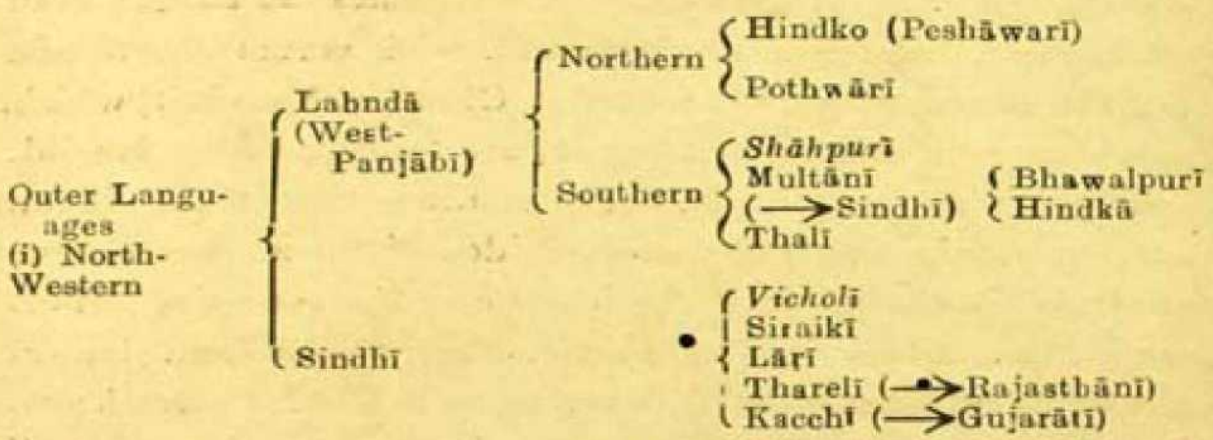
The outer languages of the Tertiary Prakrits may be divided into three groups, the North-Western, the Southern and the Eastern. Of these the North-Western consists of two languages spoken along the river Indus from the mountains to the sea. Both these show close connections with the Dardic languages and Grierson seems to think that this region shows an earlier substratum of Dardic on

This is quite on a par with the various sayings attributed to Dr. Samuel Johnson. I am also reminded of the version of the well-known "Money makes the mare go" which runs :

> "Pecuniary agencies have force,
> To stimulate to speed the female horse."

1 The same *mutatis mutandis* applies to Arabic and Urdu.

which the later Indo-Aryan was superposed. The main divisions of these are shown in the following table :



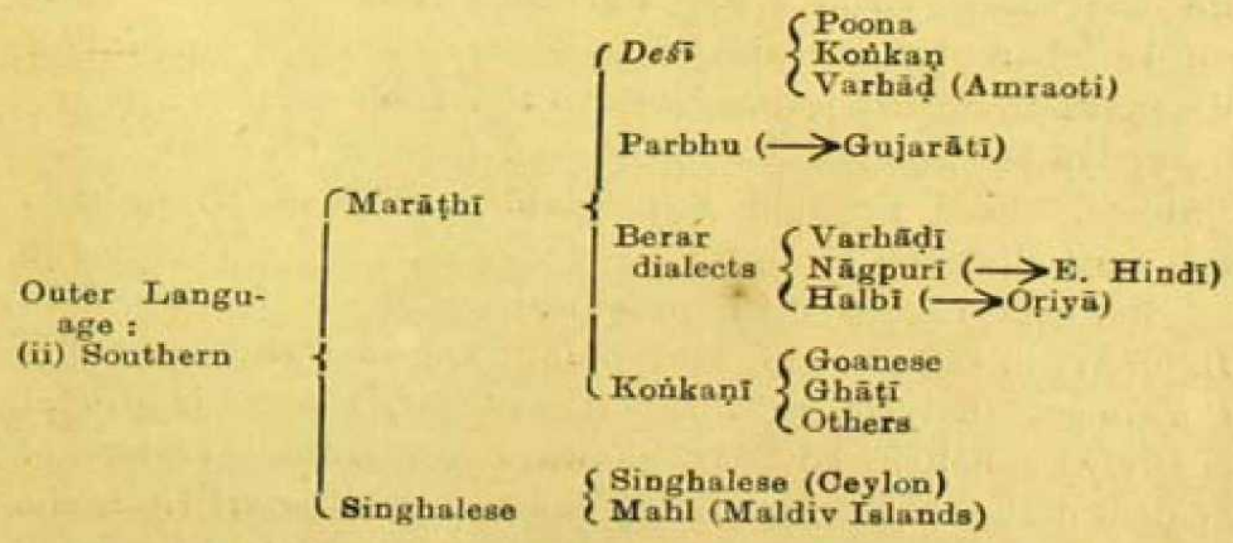

Lahndā means west. It possesses a small literature of ballads and folk-songs. The northern dialects are spoken almost exclusively by Moslems. It merges into Sindhī very imperceptibly through Multānī. Sindhī has some literature mainly of a Sufi character. Modern Sindhī has also produced some good writers. It is notable that most of the Sindhī writers are Moslems and they use an alphabet derived from the Perso-Arabic.

### § 213. *The Outer Languages: Southern group, (iii) Marāṭhī, (iv) Singhalese.*

The grouping of these two together is a matter of some doubt, for it really depends upon the position assigned to Pālī among the secondary Prakrits. But as far as the modern languages are concerned these two are pretty close together. On the east Marāṭhī shades off insensibly into Oṛiyā, but on the west it does not thus pass into Gujarātī. The Bombay dialect shows considerable admixture of Gujarātī, but it is confined only to words and does not encroach on grammar. As a matter of fact Bombay, like all big cities in India, is bilingual. In Marāṭhī the

differences of dialects are negligible. The standard dialect and the colloquials seem to form two well-marked divisions. And even between these the differences are very trifling. Among the languages of India it is the most uniform and uses the smallest proportion of *tatsama* words. A very large number of words are pure *deśya* or *tadhbava*. Marāṭhī possesses a grand literature almost the equal of Bengali. It goes back to the 13th century when Dnyāneśvar wrote his magnificent commentary *Dnyāneśvarī* on the *Bhagavad-Gītā*. This work and the songs of the other saints, Nāmdev, Tukārām and Rāmdās, have given to the language a unity which persists even to-day. Modern Marāṭhī literature is also very extensive and covers every branch of human thought. It is one of the three great literatures of modern India, the other two being Tamil and Bengali.[1]

Singhalese, too, has a literature mainly relating to Buddhist theology. The dialects of these languages are shown below:




The three forms of the standard Marāṭhī (Deśī) are merely local varieties of one dialect. The Parbhu dialect is

[1] Telugu and Gujarātī would rank fourth and fifth.

spoken by the Marāṭha official class of Bombay, who are a cultured people. Their language is largely mixed with Gujarātī. In the Koṅkaṇ and along the Western Ghāts Koṅkaṇī is spoken. It shows a good deal of Dardic influence and also of Non-Aryan languages. One variety of Koṅkaṇi is the Goanese which shows a large number of Portuguese words, because Goa has been under Portugal during quite four hundred years. The Ghāṭī dialect is spoken by the hillmen of the Western Ghāts.

§ *214. The Outer Languages: Western-Behārī; Eastern: (v) Oriyā, (vi) Behārī, (vii) Bengali, (viii) Assamese.*

All these are derived from Māgadhī and Bengali and Assamese are very close together. They all pass from one to the other quite insensibly. Behārī is divided into two sharply defined groups: the Maithilī and the Bhojpuriyā. There are also well marked ethnic differences between the speakers of these two groups.[1] The latter are the more virile tribe and their dialect reflects their sturdy character. Maithilī possesses a certain amount of Vaiṣṇava literature going back to the 15th century.

Oriyā has a small literature and though there are some dialects, these are not appreciably different from the standard dialect.

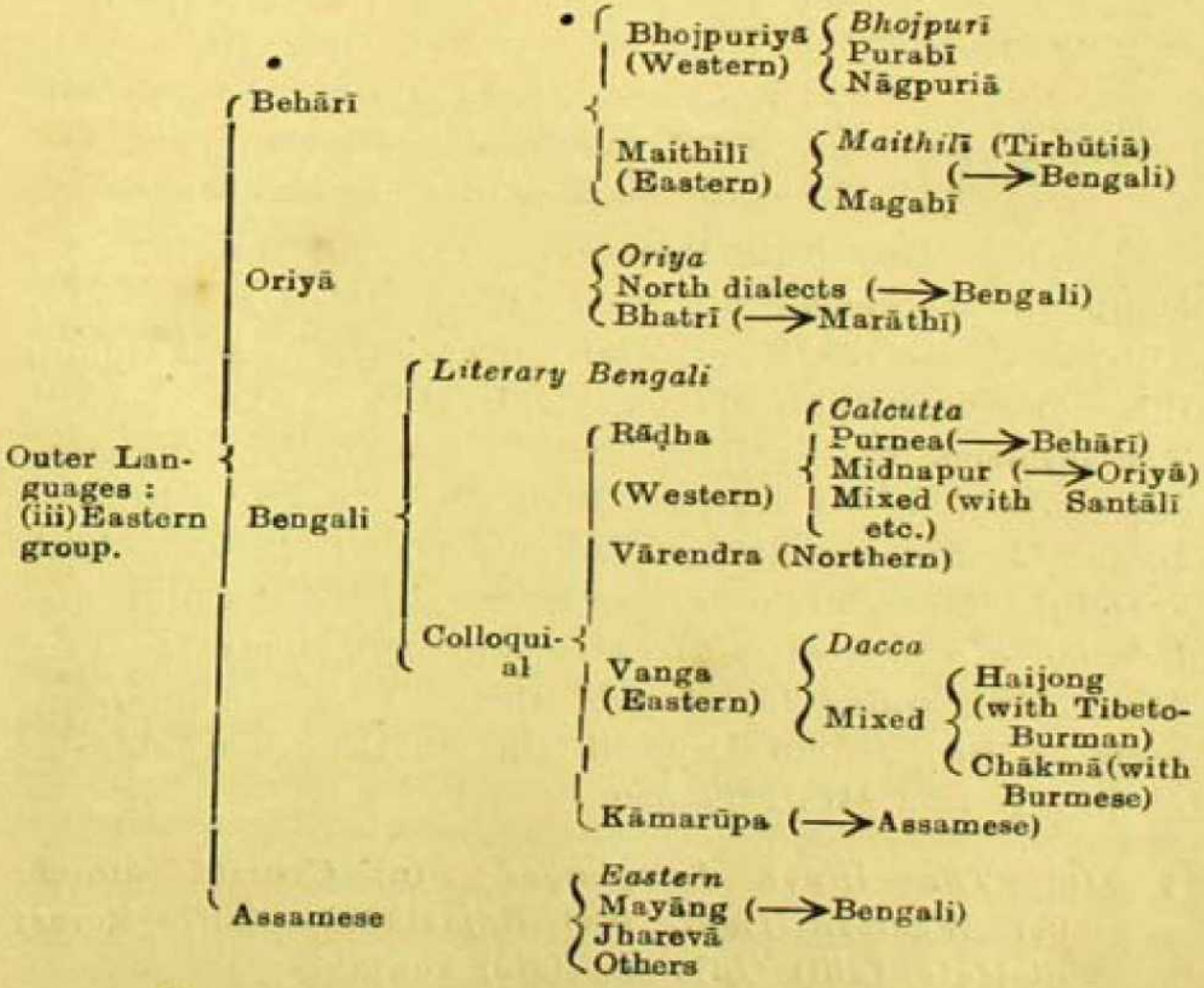
Bengali is perhaps the most important of the modern Indo-Aryan languages and being the easternmost [2] it is the most analytic of all. Its literary dialect is almost entirely sanskritised. It shows considerable variety of spoken dialects which are very markedly different from the artificial language of letters. Bengali literature is a very

[1] Grierson (op. cit., pp. 150 f.) discusses this question well.

[2] If we regard Bengali-Assamese as one sub-group.

extensive one and the language at the present moment is in the interesting condition of undergoing a renaissance. The tendency to-day is distinctly to lessen the slavish adherence to Sanskrit, and Rabindranath and others are doing their best in this direction.

Assamese too has a good literature which is mainly historical. This is a legacy from the days of Ahom supremacy. The language differs but little from Bengali, the chief differences being phonetic. The following table indicates the various sub-groups and dialects of these four languages.




The mixed dialects of Bengali and Assamese are a necessity in order to keep up communication with the

numerous aboriginal tribes. One of the most interesting of these is the Jharevā dialect of Assamese which is a regular "pidgin", made up of Bengali, Garo and Assamese.

§ *215. The Mediate Language : (ix) Eastern Hindi.*

This division of Indo-Aryan consists of only one language and it rises out of Ardha-Māgadhī. It is important on account of its position, standing as it does as a connecting link between the Outer and the Inner Languages. Even greater is its cultural importance. Its literature consists of some very fine poetry, and in the *Tulsī-Rāmāyaṇa* it possesses one of the great books of humanity. Its dialects are shown below :

Mediate Language : Eastern Hindī
- Awadhī (→ W. Hindī)
  - Awadhī
  - Bagheli
- Chattisgarhī (→ Oriyā and Marāthī)

Through the *Tulsī-Rāmāyaṇa* the influence of this language has spread all over India. Grierson regards Tulsīdās as one of the greatest writers of Asia and regards this work as "the perfect example of the perfect book". The influence of the book has been steadily increasing, and to-day it is the accepted scripture of nearly a third of India. It has appealed to the heart of India as no book ever did. There are other works, too, in the Awadhī dialect, one of the most remarkable being the *Padumāvat* of Malik Muhammad Jāyasī, a Moslem. It is a magnificent poem of Rajput chivalry all the more remarkable as coming from a Moslem's pen.

§ *216. The Inner Languages: (a) Central group: (x) Western-Hindi, (xi) Rājasthānī, (xii) Forest dialects, (xiii) Gujarāti, (xiv) Panjābī.*

The Inner languages are divided into two groups : (*a*) the Central group and (*b*) the Himalaya group. Only one of

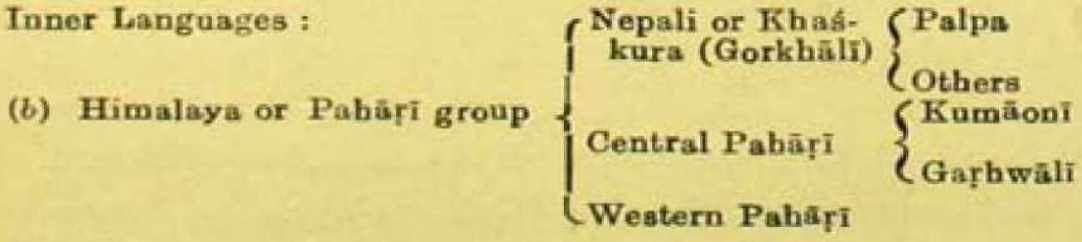
them, Western-Hindī is a direct descendant of the Midland Prākrit, Śaurasenī. The others have arisen from other varieties of Prakrit under the strong moulding influence of Śaurasenī. The country round Dehli was the centre of Hindu chivalry and culture just before the Islamic invasions began. The modern dialects of Rajasthānī have spread throughout Rajputana as a result of the conquest of Dehli by the Moslems. In Gujarat and in the Panjab the Inner Languages were superposed on a basis of Outer Languages. The Forest Dialects are more or less varieties of Rājasthānī, and Gujarātī, too, is very closely connected. In fact it is not possible to distinguish between Old Gujarātī and Old Rājasthānī.[1] Western-Hindī has a fine literature of considerable antiquity. The earliest writer mentioned is Amir Khusro. This literary dialect has clearly split into two—Urdu and Hindi—the former taking its vocabulary from Persian and Arabic and the latter from Sanskrit. Unfortunately this difference has been of late much emphasised for political purposes and the differences between Hindi and Urdu have been made part of the Hindu-Moslem trouble. Urdu literature first arose in the Deccan when the language developed certain peculiarities and was known as Dakhṇī (southern) as opposed to Rekhtā (northern). Other dialects of Western-Hindī have also developed literature, especially the Braj-Bhākhā. This latter centres round the Krishna-cycle of tales, just as Awadhī deals with the Rāma-cycle. In Rājasthānī, too, there is a valuable literature consisting of chronicles, ballads and Krishna literature. Gujarātī literature goes back to quite the 14th century and even before that Gujarāt was known for its literary

[1] For instance the poems of rā are as much Gujarātī as Rājasthānī.

activities in Prakrit, especially in works of Jaina theology. Hemachandra, the great Prakrit grammarian, was a Gujarati. Gujarātī literature to-day is showing signs of a new vigour and fortunately the sanskritising tendencies show distinct signs of waning. One branch of Gujāratī—Kaṭhiāwāḍī—possesses a good number of bardic chronicles and ballads, still not committed to writing. These present a very interesting aspect of the language. In Panjābī there is a fair amount of literature, mostly Sikh, and the language is closely akin to Western-Hindī. The different dialects are shown in the accompanying table.

### § 217. *The Inner Languages*: (*b*) *Himalaya group*, (*xv*) *Pahāṛī*.

The Himalaya languages of the Indo-Aryan branch had penetrated there at a comparatively late period. In the east of Nepal one of the Maithilī dialects had penetrated somewhat earlier than the Inner languages did. These are divided into three groups as shown below :




These languages have been borrowing much from the vocabulary of the Tibetan Himalayan dialects, but these latter are rapidly being driven out by the Aryan Pahāṛī. Nepālī possesses a small literature ; but for the others the literary language is the Hindostānī dialect of Western Hindī.

## § 218. *Argots.*

Many of the languages mentioned above have developed a special slang or argot, which is used habitually by certain classes for secret conversation when there is fear of being overheard. A great many such are languages of criminal castes or tribes, and these follow more or less the same methods as the thieves' slang in English and German or the argot of the Apaches of Paris. The Pindharis and Thugs had their special slang in order to beguile unsuspecting victims.[1] They had a variety of ways of twisting and transforming the words. Sometimes by inverting a word, sometimes by using extra syllables in the body of a word, by reduplicating certain syllables, by adding extra letters initially or finally the words are transformed beyond recognition. A good specimen from the Chūhṛā dialect of the Punjab is given by Grierson.[2] These argots are based on Indo-Aryan or Dravidian languages. Every caste and every trade-guild has got its own slang. The Parsi argot of Bombay and elsewhere is either complete inversion of each word or by a peculiar reduplication with an inserted *s* and *m*[3]; e.g., संभालजो पेलो समजे छे (take care, that fellow understands) may become जोलभासं लोपे जेमस छे or ससमंभालजो पेसमेलो ससममजे छेसमे. Various devices are used by shopkeepers to indicate prices to each other without their customers becoming aware of what is meant. Some use the terms used for dice. The Parsis have a name for each of the thirty days of the

[1] Medows Taylor in his *Confessions of a Thug* gives numerous instances of this. Thus the innocent phrase *pān lāo* (bring *pān*) was the signal of death.

[2] *L.S.I.*, I. 1, pp. 188-189.

[3] This is called the सश्यानी बोली (the *s*-slang).

month and these names are used for the numbers one to thirty.

### § 219. *The unclassified languages.*

There are two languages spoken in Burma whose exact position is not quite clear—*Karen* and *Man*. They show certain connections with the Chinese languages, but they are probably pre-Chinese. The word *man* in Chinese means "a southern barbarian", and is applied to the people and the languages of certain wild tribes on the borders of China and the wild forest tracts of Indo-China in the neighbourhood.

Then there is the *Burushaskī* or *Khajunā*, which is spoken on the extreme North-West Frontier. It defies classification among any other known languages of India. Some think it may be an ancient and distant relative of the Muṇḍā with an overlying Dravidian influence. The region where it is spoken has been the road along which numerous peoples have passed into India and so we may expect some form of speech there which defies classification.[1] The Burushaskī is a pronoun-incorporating speech, with different forms for addressing an equal, a superior gentleman and a superior lady.

The *Andamanese* has as yet defied classification. It is an extremely limited kind of agglutinating speech. The ideas to be expressed are very elementary and most of the speech is "eked out by a free use of gesture".[2]

[1] It has been suggested (see *L.S.I.*, I. 1, p. 192. ftn. 3) that this language may be the last remnant of a pre-Dardic form of speech in that region.

[2] Op. cit., p. 192.

## APPENDIX C

### The Linguistic Problem in India

The most usual remark made by foreigners regarding India is about the multiplicity of languages spoken here. In doing this the foreigner thinks in terms of his own land, which is, in most cases, much smaller. When we deal with the language problem of India the first thing we have got to remember is that India is not a small country but a subcontinent. Her extent is equal to that of Europe *minus* Russia ; and her peoples and their history, too, have been as varied as those of Europe. Consequently we should enumerate the languages spoken in Europe (*minus* Russia) before we begin to wonder at the multiplicity of languages here. I advisedly use the word "languages" not "dialects". If we count the dialects of Europe, as they have been counted in the volumes of the *Linguistic Survey of India*, there would not be a very great discrepancy in the numbers. Of course Europe has an advantage in being far richer in means of communication and in having a much wider extension of education, for both these tend to the minimising of dialectical differences. In India the want of facilities for communications and the extensive forests and mountainous regions are to a large extent responsible for the very large number of dialects enumerated in the *LSI*. In fact by far the greater portion of the dialects mentioned therein belong to forest tribes and the aboriginal inhabitants. And of these languages a fair number are spoken by a few thousand and some even by a

few hundred people. Thus the *Linguistic Survey of India* has been made very complete indeed, but it is apt to mislead a stranger at first sight regarding the linguistic state of India.[1]

To demonstrate that the languages of India are by no means more numerous than those of Europe (excluding Russia) we have only to enumerate the principal languages in both these areas.

In India (including Ceylon and Burma) we have :

(*a*) of the Indo-European family :

Urdu, Hindī, Maithilī (or Behārī), Bengāli, Assamese, Oṛiyā, Marāṭhī, Singhalese, Sindhī, Panjābī, Nepālī, Marwāṛī (or Rājasthānī), Gujarātī, Persian, Balochī, Afghan (or Pashto) ;

(*b*) of the Dravidian family :

Tamil, Malayalam, Telugu, Kanarese ;

(*c*) Tibetan and Burman.

In other words there are 22 principal languages in all.

In Europe we have :

(*a*) of the Indo-European family :

English, Dutch, German, Swedish, Dano-Norwegian, French, Spanish, Portuguese, Italian, Rumanian, Greek,

[1] See Appendices I and I-A of Vol. I of the *LSI*. Of the 854 languages and dialects enumerated therein 284 belong to the aboriginal and the Tibeto-Burman people. Of the remainder 46 are Dravidian, 48 Iranian and 36 Dardic. Among Indo-Aryan languages Grierson has mentioned 17 "languages" and 345 "dialects". Over 60 have less than a thousand speakers. Among "dialects" have been enumerated argots, tribal dialects as also even "caste dialects". In some cases the number of speakers is given as 30, 25, 20 and even 14 ! Naturally all these swell the numbers and give an entirely false notion of the multiplicity of Indian languages.

Albanian, Irish, Welsh, Polish, Czech, Servian, Bulgarian ;

(*b*) of other families :
Hungarian, Finnish and Turkish.

These make up 21 in all.

The number of languages in each of the two areas is thus seen to be substantially the same. And as regards diversity of languages, India is distinctly better than Europe, inasmuch as the Indo-Aryan languages are so close that with a little effort they are mutually understandable. In fact no two Indo-Aryan languages differ as much as English and German. There are, besides, the great unifying influence of Sanskrit and of sanskritic (Hindu) culture, which bind the Aryan languages even closer together, and even draw the Dravidian languages within the "cultural pale" of the Indo-Aryan.[1]

If language is one of the two great bonds of human unity,[2] then the diversity of the languages of India is more apparent than real ; and in fact there is greater linguistic unity in India than is discoverable in Europe. The essential unity of the major Indo-Aryan languages is quite clear to the trained linguist. But it is also capable of being appreciated by a person of average intelligence even though untrained. The proof of this statement is to be found in the fact that all the big

[1] Many years ago there used to be published a magazine, called the *Devanāgara*, which contained articles written in all the Aryan as well as the Dravidian languages of India. These were all printed in the Devanāgarī script. It was a revelation how much a person of average intellect, educated in only one vernacular, could understand in every one of these articles.

[2] The other is religion. All the principal languages of India possess this bond also in a very real sense.

cities of India are bilingual and sometimes even trilingual in the sense that two or even three languages are understood by a great portion of their people, even by the so-called "illiterate".[1] Quite a large number of educated people can read, write and speak half a dozen of our Indian vernaculars very easily.

But when we consider the *literatures* embodied in these languages (viz., the Indo-Aryan and the Dravidian) the unity observable is even greater. The fountain head of all Indian Literature is Sanskrit. The same tales are recounted and the same sentiments are echoed throughout the length and breadth of India, very often in identical phrases.

Of course, the Islamic culture stands a bit apart. Still it is not so very different as is often sought to be made out for propaganda purposes. Much that is of value in Islam is Iranian, as embodied in Persian; and this being an Aryan language embodying Aryan ideals it can be assimilated to the sanskritic without any great difficulty.

In the old days—say a century ago—Indians did not appreciate their essential unity to the same degree as they do at present. Then a man going from Bombay to Nagpur or from Calcutta to Dehli would talk of going to "a foreign land" (*paradeśa*). But to-day the spirit is very different when all India is thrilling with the new feeling of national unity.

This is not the place for political or constitutional discussions. But we must admit that the political struggle in India during the last two decades has had its repercussions in the linguistic field as well. In a sense this

[1] In Bombay, for instance, three languages are prevalent: Marāthī, Gujarātī and Hindostānī.

political struggle has brought about a linguistic awakening as well. Side by side with the growing pride in the past of our land there has come also a pride in our vernaculars.[1] Recent years have seen a renaissance of every literary vernacular of India. The present generation of students have been taking as much pride in their knowledge of the mother-tongue, as their fathers did in their mastery of English. There is a distinct movement in every centre to give to the mother-tongue its rightful place in the life and education of the people.[2] Coming as it does at the end of about a century of domination by the English language in all walks of life, this new movement has led to a good deal of confusion, and has set all our older educational authorities shaking their wise heads with doubts as to the advantages of emphasising the vernaculars.

Apart from this confusion there is yet another confusion caused in practically carrying out a policy of vernacular education in our Universities as at present constituted. Many of our Universities command such an extensive area that there are several important vernaculars whose claims have to be considered. And it becomes a very difficult practical question for a University to carry on

[1] When Indian Vernaculars were first introduced in the M.A. of the Calcutta University, the late Sir Asutosh Mookerjee insisted upon retaining the word "vernaculars" instead of the more usual "languages". "We should take a proper pride in our vernaculars" was his advice to us on that occasion. The great poet of Gujarāt, Premānand, had also great pride for his vernacular. He had vowed to make his beloved Gujarātī as great in literature as Sanskrit, and he lived to carry out his vow.

[2] This would surely give a far better chance to India's women who certainly have proved themselves more loyal to their ancient Aryan heritage than their brothers.

education, as well as to examine, in half a dozen vernaculars in all subjects. The only possible solution of this seems to be the creation of "linguistic provinces", at any rate for educational purposes, each administered by one or more universities as needed. The Moslem state of Haiderabad has already very successfully carried out this plan in the Osmania University which carries out its whole programme in Urdu. Such Universities would give great impetus to the cultivation and scientific investigation of each of the principal langua ges of India, and would go a long way in restoring the pride in the great treasures of our past literature.

The next aspect we have to consider is the "interprovincial" aspect of the question. This may also be called the "national" aspect. The whole matter is closely bound up with many of the vexed political questions to-day. India is just now passing through a phase of deep national fervour. This has implied the need of a national language as much as of a national flag. The question of the national language had been in a way solved ages ago, when the "language of the camp"—Urdu—was born. I, however, prefer to call it "Hindostānī" for several reasons. In the first place this name embodies the name of our land, in the second place it avoids the clash (inevitable when communal feelings are running high) which either of the terms "Hindī" or "Urdu" might evoke. Unfortunately a great deal of misunderstanding has gathered round the question of Hindī-Urdu. It has never been discussed, as it should have been, from the purely linguistic (and hence scientific and dispassionate) point of view. Instead of looking at it in this manner men have tried to make political and communal capital out of it. The national language is a question of national importance and as such has to be discussed dispassionately.

The Moslem conquerors brought with them the Persian language[1] and Persian (Islamic) culture, both of which enriched the life of the country. As the language of the conquerors Persian began to be eagerly studied by those who wished to serve the government or to have other dealings with the foreigners much as English is being studied to-day. The common people also began to have a smattering of Persian and in talking with their Persian-knowing masters they began to intersperse their own speech with words and phrases of Persian they had picked up. This resulting language was a mixed language, Persian vocabulary superposed upon the Western Hindi[2] grammatical structure; and it was rightly named "Urdu", the language of the camp and the bazar. The words are mainly Persian and Arabic, but the sentence construction, the morphological endings and the pronouns are all Indo-Aryan (Western Hindi), and thus the language is essentially one of our own Indian languages.[3]

This mixed tongue, which I have called Hindostāni[4] is now recognised all over India. Islam has made a home in this land so long that it has penetrated to the remotest corners and in consequence the Persian vocabulary of

[1] By that time Persian had fallen under the strong domination of Arabic, for the latter was the language of their religion. This arabicised Persian thus represents a blending of Semitic and Aryan cultures.

[2] This is the language of the country round about Debli.

[3] The language used commonly by college and school students in India to-day is a similar mixture of English words superposed on their own vernacular sentence construction. Thus, "Mondayना concertमां तुं मने accompany करजे; or आपणा professor बड़ genial and kind-hearted man आहेन. These sentences are no more English than Urdu sentences are Arabic or Persian.

[4] In Bombay it is usually called "Musalmani" on account of its Islamic vocabulary.

Hindostānī is more or less easily understood in almost every village. So here we have a language ready for use all over India. But—and it is a big "but"—beyond the ordinary needs of daily life (e.g., food, dress, ordinary business, etc.) this language ceases to be intelligible to the masses. When we wish to speak of any of the higher and cultural subjects (like history, art, politics, science, religion, etc.), we do find the language splitting up into two clearly marked divisions. These are distinguished by their vocabularies only, and according as the speaker has imbibed Islamic or Hindu culture they are called "Urdu" or "High Hindī" respectively. This constitutes a very real, and, indeed, a very formidable difficulty in the way of finding a common national language. And the present moment is not exactly propitious for finding the solution, because the whole question is vitiated by the political question of Hindu-Moslem controversy. But this does not mean that a solution is impossible. As soon as a political settlement is agreed upon and the Indian nation as a whole has settled down to work out its own future in its own way, there shall be discovered innumerable points of contact between these two apparently opposed ideals, and as soon as that has occurred, it is merely a question of time and of mutual accommodation before we get a full-fledged national language. And just because this cannot be the highly arabicised Urdu of Lucknow and Haiderabad nor the highly sanskritised Hindi of Benares, we should call it by the "neutral" name "Hindostānī". I personally think that if the propagandists of a national language were to adopt this name instead of "Hindī" (which they usually do) they would disarm much of the Moslem opposition at once.

The script to be used for this language is another important consideration. Here we touch upon some of the

deepest emotions of human beings, because the scripts of Urdu and Hindi are those of their respective Scriptures. It is a very dangerous matter to wound religious sentiment and it is impossible to reason with people who are moved by religious sensibilities. There are two alternatives open : (i) that *both* the scripts may be learnt and used,[1] or (ii) that the international phonetic script be introduced. The first alternative seems to be more feasible just at the present moment, when the tide of national fervour is running high. The second alternative is certainly more in consonance with modern scientific requirements, still here we are faced with *sentiment*, where dispassionate reasoning is of no avail.[2]

Now remains the question of English. The position of English in the world to-day has been considered by me elsewhere,[3] and here we may accept the conclusion reached there that English is rapidly attaining the position of " world-language ". We Indians have been learning English for well over a century, and to a great many of us the language is practically a second mother-tongue. As a matter of fact a good proportion of the older generation have not learnt their mother-tongue quite as thoroughly and they even *think* in English. In short, we may be justified in asserting that English has made a

[1] All schools in the United Provinces which teach Hindi and Urdu demand from the pupils the knowledge of *both* scripts as well as ability to transcribe from the one to the other.

[2] A similar sentiment is to be seen in those ultra-nationalist Iranians who seriously advocate the introduction of the ancient Avestic script for modern Iran. The recent adoption of phonetic script by Turkey may be cited, but in this case the anti-religious tendencies of the rulers were helped by the intense nationalistic feelings of the whole people.

[3] See Appendix D.

home in this land and that in the very near future the language will be studied and used far more extensively than at present. Our political and national movement owes its first inspiration to the study of English and of English Literature. And to-day even at the height of national fervour most of the nationalist journals are printed in English and in our national and provincial councils most of the business is carried on in English. The recent renaissance of our Vernaculars has certainly led to the use of these in the provincial councils, but in inter-provincial matters English is used more than Hindostānī because a large number of people outside the Hindī-Urdu areas of northern India know and speak English better than Hindostānī. There is besides the vital question of making our aims and aspirations known, first to England and then to the world at large. Thus English has had already a start—and a good start—in the race for becoming the "second language" for educated India. National sentiment calls loudly for Hindostānī no doubt, but a dispassionate consideration tends to show that English is going to be the winner in this race. Even then there shall be room enough for Hindostānī as the future language of inter-provincial communication, but we must admit that English is bound to occupy the higher position.

The political situation seems to engross all our energies to-day. It is, however, but a passing phase in our history. The destiny of India is far higher than mere political *svarāj*. India is the heir to the immemorial Aryan culture—a culture that has stood the test of many more centuries than that of the West. India has a Message to give for which the West has been groping.[1] It is the

[1] Rabindranath's winning the Nobel Prize was proof enough of the yearning of the West for the message of India.

Message of true *svarāj* (Conquest of the Self), and the world will consent to receive it only from a free India and in the English language. Hence all the welter and confusion to-day.

To sum up :

The linguistic problem of India has a threefold aspect :

(i) provincial,
(ii) national, and
(iii) international.

As regards the first ; every important Vernacular is experiencing a new life, a renaissance. It seems that they will be cultivated much more intensively in the near future. The way of least resistance in these circumstances is to divide the country (at any rate for the purposes of education) into "linguistic provinces". This would assuredly bring out the finest in each Vernacular. Each Vernacular is as it were a gem, which is required to be cut and polished in a particular way to bring out its intrinsic beauty. Then by joining all these we shall get a necklace of exquisite gems worthy of our Bhārat-Mātā.

Besides the mother-tongue we shall need an interprovincial language to serve as a common language for the masses. Let that be Hindostānī, neither Urdu nor Hindi, but a harmonious blend of them both typifying in itself the two great cultures of our peoples united in a nation. Here, as we have also seen, English is a close rival, especially in all the higher fields of human activities. There *is* a future for Hindostānī, but it is within definite limits ; and as India gains a higher and higher position as a nation, English will come to occupy a position next to the mother-tongue itself even within our national life.

Lastly, as a member of the Indo-British Commonwealth of Nations and as a great member of the League of Nations India needs English. Perhaps this very fact will give to English a position within the land as the more important interprovincial language. And above all in order that the ancient Aryan Message shall be proclaimed to the world, and that thus India may fulfil her destiny, she should make the English language—the world-language of the future—her own.

# APPENDIX D

## English as World-Language [1]

Language is admittedly one of the fundamental factors of unity in human society and repeatedly in the history of the world the language-bond has proved stronger than bonds of race and blood-relationship. The limits of nations in the past have been mainly linguistic. The βαρβαροι of the Greeks were those who did not understand and could not talk the language of the Hellenes, and the म्लेच्छ people were those who were unmoved by the sacred chants of the Vedas. This strength of the linguistic bond is quite clearly understandable if we only remember the fundamental aspect of language. Language is a *human institution* and each language embodies the achievements and reflects the aspirations of a particular section of the human race. Each language has grown spontaneously, as it were, with the growth of the people who speak it, and hence the speakers of it have an irresistible "fellow feeling" with each other.

The idea of human brotherhood is as ancient as the human race itself and with this idea has always gone the idea of a world-language. Leaving out of account ancient history, there have been no less than 71 attempts at universal language made since 1629 A.D. in Europe alone.[2] The first of these was by Descartes who in that

[1] A Memorandum communicated to the Northern Peace Conference Union, Stockholm, Sweden.

[2] *International Language* by W. J. Clarke, 1907. The information in the following paragraphs has also been mainly derived from this book.

year forecasted " a regular universal grammar ; words to be formed with fixed roots and affixes and to be in every case decipherable from the dictionary alone ".

All such universal languages can be divided into three main types : *a priori*, *a posteriori* and *mixed*. The first type creates arbitrary rules of grammar and an arbitrary symbology for words. Ideas are divided into categories and each category is represented by a letter of the alphabet and so on with further sub-divisions. The system is much like the classification system of Dewey used in our libraries with this difference that letters are used instead of figures. The second type takes the existing " natural " languages and seeks to combine the common features of all by invariable and more or less arbitrary rules of grammar. In this type the words are more or less recognisable, though the sentence construction often jars on a sensitive ear. The *mixed* type is a mixture of the former two types.

The first type is obviously, in its very nature, cumbrous and impracticable. It may delight a mind which always seeks order and regularity and which thinks in categories. But for use in everyday life such attempts are not of much use. In the *mixed* type, too, the *a priori* element is a serious hindrance. In fact the utter unfamiliarity of the words as compared with the familiar forms of natural speech are a serious objection.

The *a posteriori* languages present no such difficulty, for they are based entirely on the known natural languages. They can be simplified and regularised to a high degree of perfection. The most notable of such types in recent years has been Esperanto invented by Dr. L. Zamenhof of Warsaw. Himself a trained linguist, able to read, write and speak all the important languages of Europe, he devoted his whole life to this philanthropic ideal of a universal language. He carefully analysed all grammars

and laid down sixteen fundamental rules as an irreducible minimum. He similarly analysed the vocabularies of the various languages and arrived at a certain number of *roots* from which by adding various affixes of fixed value the whole complicated structure of a language could be built up. He naturally took as his basis the Indo-European languages, for they belong to politically the most important part of humanity. But he did not confine himself to the Indo-European family alone. He took the broad principle of *agglutination* as a fundamental one in his language, thus rendering Esperanto a flexible language of immense power and an almost unlimited range of expression. The root vocabulary which he first published is a deeply and carefully thought-out piece of linguistic analysis. He has tried to take the roots with reference to the number of speakers of natural languages to whom they are familiar. Thus well-nigh 60 per cent. of his roots are Latin in origin and nearly three quarters of the rest are Germanic. But he has given thought to "representation of minorities" as well, and the Slavic and other groups of the Indo-European languages have also contributed to a limited extent. In any case, viewed from even a strictly philological viewpoint, Esperanto is a most remarkable invention and the work of a giant mind and of a deeply loving heart.

The essential advantages claimed for Esperanto are its simplicity, its flexibility and its regularity. The sixteen rules of grammar can be mastered by a man of average intelligence in about one hour's time. The vocabulary should not present great difficulty to any person familiar with one of the modern European languages, and for an educated person, who knows more languages than one, there should be no difficulty whatever. In short one can read it fluently in about a week and to speak with ease may require as much longer.

Of all the *a posteriori* languages, so far launched into existence, Esperanto is one of the best adapted to be the World-Language but it has one fundamental defect. A language to be adopted by any large number of human beings and to be used by them for any length of time must be *living* and *growing*. It is exactly for this reason that no *dead* language can become the world-language. Now Esperanto is certainly not a dead language by any means, but it possesses within it the " seed of death ". Zamenhof had before him the example of Volapük which was very much to the front in the days when Esperanto was first given out to the world. This language (Volapük) was wrecked by having too many changes being suggested in its structure ; and there was no central authority to control and make note of these suggestions. Zamenhof therefore formed an International Central Committee to deal with all matters of change in Esperanto. He very wisely kept himself strictly aloof from any interference with this body. He gave them fullest permission to add to the vocabulary and even to adopt new affixes as need arose and supplementary vocabularies have been issued more than once. *But he definitely forbade any change in the sixteen fundamental rules.* Of course he saw the difficulties which would arise if these fundamentals were changed and he did not want to repeat the disaster that had overwhelmed Volapük. But this very prohibition is the " seed of death " for a language. It, as it were, makes the skeleton rigid and fossilised, and if the skeleton does not grow and develop with the needs of the body, death must inevitably ensue. In fact the history of Esperanto so far has already definitely shown this weak spot. An accusative case suffix is used in Esperanto to denote the direct object of a verb and also the " goal " of a verb of motion. Undoubtedly both these are essentially usages sanctioned

by Indo-European grammar, but the latter type is being gradually discarded in English and French, two of the most important languages of the present times. This part was therefore felt to be a difficulty by most English Esperantists and some of them suggested its removal. But naturally Zamenhof would not allow it. Had he done it Esperanto would have split up long ere this. But the fact that he did not allow the change did not prevent a split, and some of the aggrieved Esperantists started a new language, Ido, which is Esperanto with a few changes. Zamenhof prevented the dissolution of his language just at that time, but in that very prevention he demonstrated the existence of this fatal defect in his scheme. It does not detract a whit from his great work that he did not see this defect, because *this defect must invariably exist in all artificial languages*. Zamenhof had so far succeeded in reducing the complications of grammar and had so carefully chosen his phonetic elements that one would think that one had reached the bed-rock of grammar. But there is no such thing as a firm bed-rock of linguistic essentials. *Language is a human institution and with the human race it must grow and change*. Hence all artificial languages must be foredoomed to failure. Had Zamenhof not included the "accusative of motion" in his scheme, even then some other difficulty might have arisen (the other accusative, for example) and a split must have resulted sooner or later. When in a living growing organism there is rigidity *anywhere*, disintegration is the inevitable result. And rigidity in *some* features at least, must be at the root of all artificial languages.

Thus we are inevitably thrown upon the *natural living* languages of the world in our search of a world-language. These languages are not "rigid" in any sense of the term

because these have changed both in structure and vocabulary with the changing ages. They have grown with the people and have faithfully embodied and reflected their hopes and ideals. Their want of rigidity is evident even on a cursory acquaintance with their history.[1]

The next question that would arise is, which of the present living languages is the best suited for that unique honour. In determining this question four main points have to be considered: (1) simplicity of structure, (2) wide extent, (3) commercial importance and (4) political strength. It is not at all necessary to labour these four points because they are self-evident to every one. Of course no *one* language known at present combines within itself *all* the four points together, so we have to take as it were a balance of all these qualities. Under the circumstances and conditions of modern world-politics the last two are the most important. The second qualification is necessarily implied in the third. The first qualification is also necessary but not absolutely so. Thus Persian is perhaps the simplest of languages in grammar and structure, but it cannot assuredly take the position of a world-language.

Taking, therefore, the question as a whole we must come to the conclusion that English is the only language that comes nearest to fulfilling the four requirements. It is supreme as regards numbers and extent. Its importance commercially is also unchallenged. Perhaps Spanish,

[1] And we should also note that whenever any "natural" language has become rigid for any reason it has ceased to be "living". Sanskrit is a typical case of a once living language becoming "rigid" in grammar and then becoming "dead". The living languages of the people of India have grown and have prospered because no fetters were introduced for them in the shape of grammars endowed with an almost religious authority.

commanding the vast Central and South American markets, is its nearest rival in that respect, but even that is a good way behind. And the political strength of English-speaking races is beyond any doubt now. In fact the world-language *must* be the language of the races that lead the world politically.[1] The nations that wield this power are the British in the old world and the Americans in the new—and *both* speak English.

While English thus fulfils the last three requirements it also possesses the first recommendation of simplicity. Of all the languages of Europe it is undoubtedly the simplest in structure. The only really serious rival of English for the position of a world-language was, till recently, French. This was due to the domination of France in European politics from the days of Charlemagne onwards. But as already remarked, it is commerce, united to political power, that is the real deciding factor at the present time. And in respect of commerce, French takes the fourth place in the world, Spanish and German being considerably higher on the list. And the question of the political and diplomatic importance of English was decided when the Treaty of Washington closing the Russo-Japanese War was drafted *both* in English and in French. This and the recent Treaty of Versailles have admitted English speech as at least the equal of French in diplomacy and politics as well.

English has another great advantage. Owing to the world-wide connections of England and owing to the varied foreign nations that have come to England during

1 This was the chief reason for the acceptance of Latin in Europe during so many centuries. The Christian Church doubtless was also a factor in the spread of Latin, and the Church also was a political power of the first magnitude in those ages.

her long history the vocabulary of English has been enriched by foreign elements to a far greater extent than that of any other European language. This in itself constitutes a claim to being adopted for international purposes. English is a Germanic tongue with a preponderatingly Latin vocabulary.[1] Thus we see that even as regards structure and vocabulary English is eminently fitted to be the world-language. The force of circumstances has put England at the head of world-politics and the same circumstances have shaped the English tongue and have given to it a form which is already international in its simple structure and rich treasure of loan-words. And the pressing needs of rapid international communication will mould the language towards still greater simplicity and will import foreign words in larger numbers yet,[2] till it will become one day the truly international world-language. No mere committee or a body composed of scholars, however eminent, can give to English the position which the force of circumstances—call it Divine Providence if you will—is giving it. Languages are not moulded by committees or by scholars. The forces which mould nations can alone mould languages.

If there is anything clear amidst the present outward chaos in our world, it is the conviction held by all the best minds that the heart of our old world is now yearning for international and universal brotherhood. That is to be the key-note of our future, that is the appointed destiny of the

[1] This phenomenon is paralleled also in Urdu in India, admittedly a language which grew under the political conditions of the land in the 15th century, in order that the various people of India might understand each other and also their foreign rulers from Persian-speaking lands.

[2] Consider, for example, the "war-words."

world. The feeling is there and as soon as the immense amount of froth cast up by the world war has subsided, the forces of unity shall gather strength and shall carry all before them. And this same spirit of unity—the *Zeitgeist* of our twentieth century—shall also help to mould the English speech to take its appointed place as the interna tional world-language.

For us in India [1] the position is somewhat anomalous. But our history has furnished in miniature the same problem of a common language. We have had our language difficulties in the past. In the ancient days of Hindu supremacy—the days of theocracy—we had the sacred Sanskrit as our common tongue. In Europe, Latin occupied the same position once and for the same reason. Later came the invasion of Islam and the establishment of Moslem rulers in India. As long as Islamic power was more or less confined to local and provincial centres, its influence on the languages was not clearly marked. But under Akbar when the Islamic rule in India approached its zenith, we note the rare phenomenon of a common language growing up into life.[2] The Persian speaking conquerors united the larger part of India under their sway and these political conditions grafted the rich Islamic vocabulary of Persia on to the vernaculars of India. Round Imperial Dehli and its neighbourhood a new language was born of Indo-Persian parentage. This language was Urdu, which, as the name implies, was the *language of the camp* and it has served ever since as the common speech for interprovincial intercourse all over India. It may also be pointed out that the political supremacy of Islam in Asia gave to Persian the position of the

[1] The language problem in India has been already considered above in Appendix C.

[2] The actual beginnings of Urdu are about a century earlier.

diplomatic language of Asia, just like that of French in Europe. The Indian nation, now united, is deeply concerned with the question of a common language, a national language, as it were, for India. That question has been already practically settled by the forces which have unified the Indian peoples. When the English came to India they found the Urdu language already in possession of the field as the common tongue and they accepted it as such. The antagonism, artificially fostered for personal or political reasons between Hindī and Urdu, is bound to die out as the people unite closer together. The common language of India is to be neither the sanskritised Hindi of the Pandits of Kashi, nor the arabicised Urdu of the Moulavis of Lucknow, but it will be a language having a vocabulary borrowed from both Sanskrit and Arabic ; and just because united India embodies the Hindu-Islamic culture, its language also shall symbolise this Hindu-Moslem unity. The people shall be moulded into a united Indian nation and their common tongue shall be the Hindostānī language—a tongue enriched with gifts from all our Indian languages. Here also we see the problem being solved by the force of the *Zeitgeist*, the spirit of the age, which calls so loudly to the peoples for unity and co-operation.

Such is our miniature language problem in India. But it is not for nothing that Providence has guided England to our shores and has made her the supreme power in our land. With the English-speaking British race we have to work out our destiny and hence in the days to come, we too shall have to learn English. Not only for "international," but even for our national purposes English will have to be used in a larger and larger measure. Hindostānī will, of course, be useful for the masses, but for all important aspects of our national life English will have to be used. We have made English our own language to all intents.

With our growing "national" patriotism we will, of course, learn our own languages first, but we must have English as compulsory second language like the rest of the educated classes all the world over.

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# *ERRATA.*

| | | | |
|---|---|---|---|
| Page | 8, last line but one | for Chapter VII | read Chapter IX. |
| ,, | 15, footnote 2 | ,, ঁ | ,, ঁ |
| ,, | 29, line 12 | ,, created | ,, considered. |
| ,, | ,, footnote 1, line 3 | ,, and a | ,, and |
| ,, | 35, last line but one | ,, Hemachandra | ,, Hemacandra |
| ,, | 40, last line | ,, Chapter IX | ,, Chapter VIII. |
| ,, | 41, line 13 | ,, *1S55* | ,, *1855.* |
| ,, | 45, line 5 | ,, (*e*) | ,, (*d*). |
| ,, | 55, line 20 | ,, scholers | ,, scholars. |
| ,, | 60, last line but one | ,, Chapter VII | ,, Chapter IX. |
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| ,, | 67, footnote 1, line 2 | ,, *Malayp-olyne-sian* | ,, *Malay-polyne-sian.* |
| ,, | 71, footnote 1, last line | ,, St. Chair | ,, St. Clair. |
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| ,, | 83, Table of Australian Languages | ,, Yook | ,, York. |
| ,, | 84, line 18 | ,, land | ,, hand. |
| ,, | 97, line 8 | ,, Ge'ez | ,, Ghe'ez. |
| ,, | 102, line 2, omit the heading THE URAL-ALTAIC LANGUAGES. | | |
| ,, | 103, line 20 | for § (ð) | read § 23 (ð). |
| ,, | 119, line 4 | ,, *katab-* | ,, *kitāb-.* |
| ,, | ,, line 5 from bottom | ,, *family languages* | ,, *family of languages.* |
| ,, | 121, Table of Semitic Languages | ,, Ehkili | ,, Ekhili. |
| ,, | ,, ,, ,, ,, | ,, Ambrica | ,, Amharic. |
| ,, | ,, ,, ,, ,, | ,, dialecst | ,, dialects. |
| ,, | ,, Transpose footnotes 9 and 10. | | |

| | | | |
|---|---|---|---|
| Page 122, line 19 | for tury | read century. |
| ,, ,, footnote 2, the second sentence should read " The Akkads proper spoke a Semitic language". | | |
| ,, 123, line 7 | for *Language* | read *Languages.* |
| ,, ,, line 26 | ,, do do hot | ,, do not. |
| ,, 125, line 7 from bottom | ,, *Hyperborian* | ,, *Hyperborean.* |
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| ,, 160, lines 18-19, omit sentence " I have...brackets." | | |
| ,, 161, footnote 1, insert " I " at the end of the first line. | | |
| ,, 162, Table of Iranian Group for Pushto | | read Pashto. |
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| ,, ,, ,, ,, | ,, Hindustānī | ,, Hindostānī. |
| ,, ,, ,, ,, | ,, Sinā | ,, Shīnā |
| ,, ,, ,, ,, | ,, Citrālī | ,, Chitrālī. |
| ,, 169, 171, 173, 175, 177, line 1, for THE INDO-EUROPEAN LANGUAGES read GROWTH OF LANGUAGES. | | |
| ,, 169, line 17 | for vallies | read valleys. |
| ,, 170, line 17 | ,, Punjab | ,, Panjab. |
| ,, 186, line 9 | ,, नरधम | ,, मरघन |
| ,, 195, line 9 | ,, पावं | ,, पावु |
| ,, 196, lines 15 and 18 | ,, Bismarck | ,, Bismark. |
| ,, 203, line 11 | ,, ἀδελφο's | ,, 'αδελφο's |
| ,, 205, line 5 | ,, *addressiug* | ,, *addressing.* |
| ,, 214, footnote 3 | ,, C δικη | ,, 'ο δι'κη |
| ,, 216, line 11 | ,, गोपाउं | ,, गेपाउं |

Page 220, under the diagrams delete " Fig. 2."

| | | | |
|---|---|---|---|
| ,, | 221, left hand column of text from bottom, | for तालपृष्ठम् | read तालुपृष्ठम् line 6 |
| ,, | 238, last line but one of text | for *u* | read *u͡* |
| ,, | 266, footnote 2, line 1 | ,, **bhendh-* | ,, **bheudh-* |
| ,, | 278, line 5 | ,, *Effects* | ,, *Effect.* |
| ,, | 279, footnote 3, line 3 | ,, repening | ,, re-opening. |
| ,, | 281, below the diagram | ,, Fig. 18 | ,, Fig. 19. |
| ,, | 304, line 6 | ,, syntactic | ,, synthetic. |
| ,, | 307, line 20, omit the words " from Shakespeare". | | |
| ,, | 313, footnote 4, line 3 | for φε'ρω | read φε'ρω. |
| ,, | ,, ,, ,, | ,, ποτωμα | ,, ποτωμαι |
| ,, | 314, line 2 of footnotes | ,, φα'ινω | ,, φαι'νω |
| ,, | ,, ,, 5 ,, ,, | ,, γεγεια'σκω | ,, γενεια'σκω |
| ,, | 314, line 16 | ,, इस्ताइग्नि | ,, इस्ताइस्नि |
| ,, | 342, Table of Tibeto-Chinese Languages | ,, Annamese | ,, Anamese. |
| ,, | ,, ,, ,, ,, | ,, Tai | ,, Thai. |
| ,, | 354, ,, Modern Aryan Languages | ,, Bihārī | ,, Behārī. |
| ,, | ,, ,, ,, ,, | ,, Intermediate | ,, Mediate Language. |
| ,, | ,, ,, ,, ,, | ,, Baloch | ,, Balochī. |
| ,, | ,, ,, ,, ,, | ,, Khāwār | ,, Khowār. |
| ,, | 355, footnote 2, line 2 | ,, thnic | ,, ethnic. |
| ,, | 378, line 12 | ,, जदवांतोड् | ,, जडवांतोड्. |
| ,, | ,, footnote 3, last line but one. | ,, संबधी | ,, संबंधी. |
| ,, | ,, ,, last line | ,, इस्तांगलीभो | ,, इस्तांगुलीभो. |
| ,, | 382, line 11 | ,, *Western-Behārī* | ,, *Western : Behārī.* |